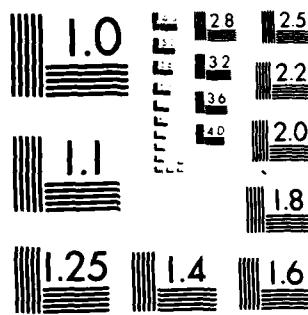


AD-A124 075 20405BT ASSAULT BREAKER MISSILE NUMBER 0009 ROUND
NUMBER M966 30 NOVEMBER 1982(U) ARMY ELECTRONICS
RESEARCH AND DEVELOPMENT COMMAND WSMR NM ATM.

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NATIONAL BUREAU OF STANDARDS 1962-A

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Nov 82
DR 1277

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METEOROLOGICAL DATA REPORT

20405BT ASSAULT BREAKER
Missile Number 0009
Round Number M9G6
30 November 1982

by

DONALD C. KELLER
Program Support Coordinator
Phone Number (505) 679-9568
AVN Number 349-9568

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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| 20. ABSTRACT (Continue on reverse side if necessary and identify by block number) - Meteorological data gathered for the launching of the 20405BT ASSAULT BREAKER, Missile Number 0009, Round Number M9G6 are presented in tabular form. | | |

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INTRODUCTION

20405BT ASSAULT BREAKER, Missile Number 0009, Round Number M9G6, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0851:15 MST. 30 Nov 82. The scheduled launch time was 0830 MST.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

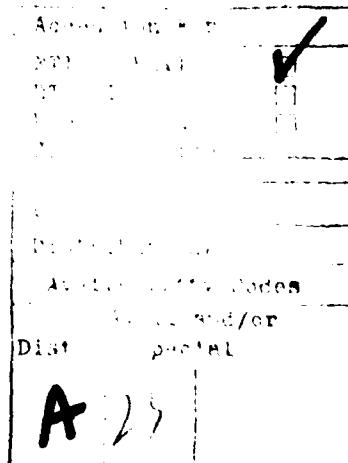
b. Upper Air

(1) Low level wind data were obtained from pilot-balloon observations at:

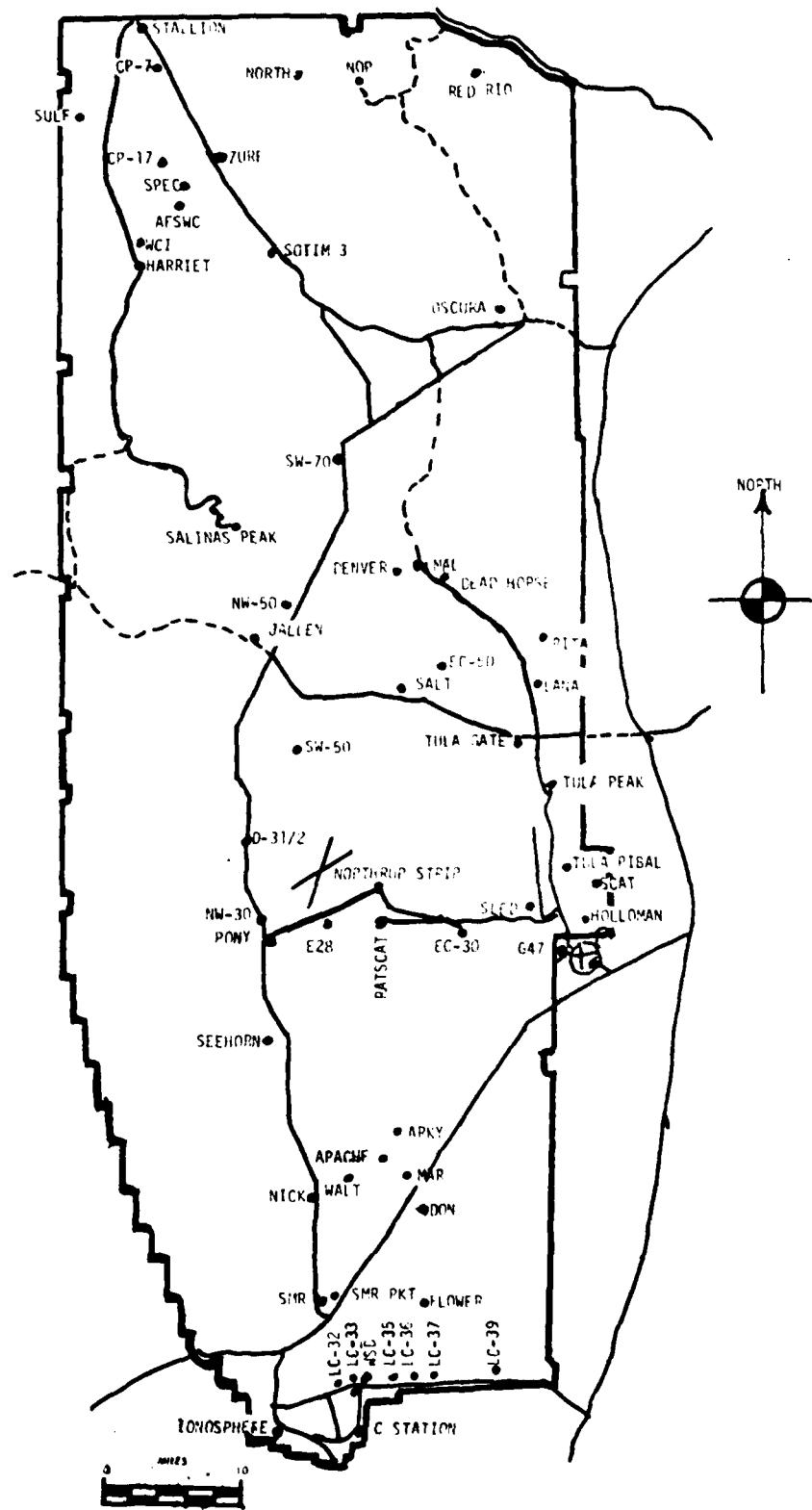
| <u>SITE</u> | <u>ALTITUDE</u> | <u>TIME</u> |
|-------------|-----------------|-------------|
| WSD | 2760 Meters | 0842 MST |
| WSD | 3000 Meters | 0851 MST |
| JALLEN | 3000 Meters | 0800 MST |
| JALLEH | 3000 Meters | 0900 MST |

(2) Air structure data (rawinsonde) were collected at the following Met. Sites.

SITE AND TIME
JALLEN 0600 MST
HOLLOWMAN 0730 MST
LC-37 0730 MST
WSD 0850 MST
JALLEN 0855 MST



WSMR METEOROLOGICAL SITES



LC-33
Launch Area

LC-34

W-11

1 mile = 160 ft

Y10, 500

W-11
Toler

Y10, 500

W-12, 500
Ludan

Y10, 500

Y10, 500

Y10, 500

Y10, 500

1-000

○ Launch Area

○ Launch Area

1-0700

1-190

1-310

1-310

○ Launch Area

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TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

| POLE #1 | | | POLE #2 | | | POLE #3 | | |
|------------|---------|-------------|------------|---------|-------------|------------|---------|-------------|
| T-TIME SEC | DIR DEG | SPEED KNOTS | T-TIME SEC | DIR DEG | SPEED KNOTS | T-TIME SEC | DIR DEG | SPEED KNOTS |
| T-30 | 154 | 03 | T-30 | 158 | 03 | T-30 | 156 | 03 |
| T-20 | 154 | 03 | T-30 | 158 | 02 | T-20 | 152 | 04 |
| T-10 | 154 | 03 | T-30 | 166 | 03 | T-10 | 156 | 03 |
| T-0.0 | 147 | 05 | T-30 | 163 | 04 | T-0.0 | 164 | 05 |
| T+10 | 143 | 07 | T+10 | 160 | 04 | T+10 | 153 | 07 |

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (102 FT TOWER)

| LEVEL #1, 12 FEET X484,312.64, Y185,057.73, H3983.00 (base) | | | LEVEL #2, 62 FEET X484,982.64, Y185,57.73, H3983.00 (base) | | |
|--|---------|-------------|---|---------|-------------|
| T-TIME SEC | DIR DEG | SPEED KNOTS | T-TIME SEC | DIR DEG | SPEED KNOTS |
| T-30 | 188 | 02 | T-30 | 178 | 03 |
| T-20 | 198 | 02 | T-20 | 177 | 04 |
| T-10 | 196 | 02 | T-10 | 175 | 05 |
| T-0.0 | 199 | 01 | T0.0 | 171 | 04 |
| T+10 | 192 | 02 | T+10 | 165 | 04 |

| LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base) | | | LEVEL #4, 202 FEET X484,982.64, Y185,057.73, H3983.00 (base) | | |
|---|---------|-------------|---|---------|-------------|
| T-TIME SEC | DIR DEG | SPEED KNOTS | T-TIME SEC | DIR DEG | SPEED KNOTS |
| T-30 | 182 | 04 | T-30 | 169 | 07 |
| T-20 | 174 | 04 | T-20 | 172 | 07 |
| T-10 | 174 | 04 | T-10 | 171 | 08 |
| T-0.0 | 176 | 03 | T0.0 | 170 | 08 |
| T+10 | 180 | 03 | T+10 | 170 | 08 |

PROJECT SURFACE OBSERVATION

TABLE 4

| DATE | 30 | NOV | 82 |
|------|-------|-----|------|
| TIME | MM | MM | YEAR |
| 0800 | 872.3 | 2.5 | 0.9 |
| 0830 | 872.2 | 4.7 | 2.4 |
| 0850 | 872.3 | 5.5 | 2.4 |

| OBSTRUCTIONS TO VISIBILITY | CLOUDS | | | REMARKS | | | |
|-------------------------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|---|
| | 1st LAYER AMT | 1st TYPE HGT | 2nd LAYER AMT | 2nd TYPE HGT | 3rd LAYER AMT | 3rd TYPE HGT | |
| | 1 | CU | 6,000 | 6 | AC | 10,000 | 1 |
| | 1 | CU | 5,000 | 4 | AC | 10,000 | 1 |
| | 1 | CU | 4,500 | 3 | AC | 10,000 | 1 |

| TIME | MM | MM | YEAR | RELATIVE HUMIDITY % | DEW POINT OF CC | TEMPERATURE OF CC | PRESSURE IN MM | RELATIVE HUMIDITY % | DEW POINT OF CC | TEMPERATURE OF CC | PRESSURE IN MM | RELATIVE HUMIDITY % | DEW POINT OF CC | TEMPERATURE OF CC | PRESSURE IN MM |
|------|-------|-----|------|---------------------------|-----------------------|-------------------------|----------------------|---------------------------|-----------------------|-------------------------|----------------------|---------------------------|-----------------------|-------------------------|----------------------|
| 0800 | 872.3 | 2.5 | 0.9 | 89 | | | | | | | | | | | |
| 0830 | 872.2 | 4.7 | 2.4 | 85 | | | | | | | | | | | |
| 0850 | 872.3 | 5.5 | 2.4 | 80 | | | | | | | | | | | |

PSYCHROMETRIC COMPUTATION

| TIME: | 0800 | 0830 | 0850 |
|-----------------|------|------|------|
| DRY BULB TEMP. | 2.4 | 4.7 | 5.5 |
| WET BULB TEMP. | 1.8 | 3.6 | 4.0 |
| WET BULB DEPR. | 0.7 | 1.1 | 1.5 |
| DEW POINT | 0.9 | 2.4 | 2.4 |
| RELATIVE HUMID. | 89 | 85 | 80 |

W10

20 Nov 22

177,252.20

184,262.11

| SFC | 125 | 06 | 1800 | 263 | 23 |
|------|------|------|------|-----|----|
| 60 | "186 | "186 | 1860 | 261 | 25 |
| 120 | 176 | 02 | 1820 | 259 | 28 |
| 180 | 173 | 05 | 1880 | 251 | 29 |
| 240 | 163 | 02 | 2040 | 257 | 26 |
| 300 | 162 | 02 | 2100 | 255 | 25 |
| 360 | 175 | 02 | 2160 | 251 | 25 |
| 420 | 160 | 03 | 2220 | 253 | 26 |
| 480 | 157 | 02 | 2280 | 255 | 29 |
| 540 | 168 | 01 | 2340 | 250 | 32 |
| 600 | 210 | 02 | 2400 | 254 | 30 |
| 660 | 220 | 05 | 2460 | 257 | 32 |
| 720 | 220 | 03 | 2520 | 260 | 33 |
| 780 | 220 | 03 | 2580 | 260 | 35 |
| 840 | 215 | 03 | 2640 | 256 | 35 |
| 900 | 220 | 03 | 2700 | 258 | 37 |
| 960 | 225 | 04 | 2760 | 254 | 36 |
| 1020 | 234 | 06 | | | |
| 1080 | 239 | 08 | | | |
| 1140 | 255 | 08 | | | |
| 1200 | 232 | 09 | | | |
| 1260 | 245 | 10 | | | |
| 1320 | 255 | 11 | | | |
| 1380 | 252 | 12 | | | |
| 1440 | 265 | 14 | | | |
| 1500 | 263 | 15 | | | |
| 1560 | 254 | 20 | | | |
| 1620 | 258 | 18 | | | |
| 1680 | 251 | 17 | | | |
| 1740 | 257 | 22 | | | |

WSD

30 Nov 82

0851

483,852.29

184,982.45

98.75

| | | | | | |
|------|------|----|------|-----|----|
| SFC | 150 | 08 | 1800 | 250 | 24 |
| 60 | 1150 | 08 | 1860 | 252 | 26 |
| 120 | 183 | 07 | 1920 | 249 | 26 |
| 180 | 186 | 06 | 1980 | 249 | 27 |
| 240 | 196 | 05 | 2040 | 247 | 26 |
| 300 | 168 | 05 | 2100 | 250 | 27 |
| 360 | 177 | 06 | 2160 | 248 | 28 |
| 420 | 176 | 08 | 2220 | 252 | 27 |
| 480 | 155 | 05 | 2280 | 250 | 29 |
| 540 | 184 | 06 | 2340 | 259 | 27 |
| 600 | 224 | 09 | 2400 | 252 | 34 |
| 660 | 233 | 06 | 2460 | 258 | 32 |
| 720 | 216 | 06 | 2520 | 260 | 37 |
| 780 | 246 | 05 | 2580 | 256 | 40 |
| 840 | 223 | 06 | 2640 | 259 | 38 |
| 900 | 220 | 07 | 2700 | 252 | 37 |
| 960 | 244 | 09 | 2760 | 252 | 37 |
| 1020 | 261 | 08 | 2820 | 257 | 35 |
| 1080 | 264 | 08 | 2880 | 254 | 33 |
| 1140 | 243 | 09 | 2940 | 257 | 34 |
| 1200 | 253 | 14 | 3000 | 257 | 37 |
| 1260 | 269 | 17 | | | |
| 1320 | 255 | 22 | | | |
| 1380 | 255 | 21 | | | |
| 1440 | 243 | 21 | | | |
| 1500 | 250 | 21 | | | |
| 1560 | 252 | 21 | | | |
| 1620 | 253 | 20 | | | |
| 1680 | 254 | 22 | | | |
| 1740 | 255 | 21 | | | |

JALLEN

30 Nov 82

0800

451,560.00

465,177.00

4051.00

| | | | | | |
|------|-----|----|------|-----|----|
| 560 | 000 | 00 | 1000 | 257 | 24 |
| 60 | 104 | 02 | 1000 | 257 | 24 |
| 110 | 104 | 05 | 1000 | 256 | 20 |
| 180 | 104 | 07 | 1000 | 256 | 31 |
| 240 | 004 | 10 | 2040 | 257 | 31 |
| 300 | 210 | 13 | 2100 | 259 | 29 |
| 360 | 214 | 15 | 2160 | 262 | 20 |
| 420 | 21 | 16 | 2200 | 269 | 26 |
| 480 | 203 | 17 | 2200 | 274 | 25 |
| 540 | 207 | 17 | 2340 | 271 | 24 |
| 600 | 029 | 18 | 2400 | 269 | 24 |
| 660 | 032 | 18 | 2460 | 265 | 24 |
| 720 | 235 | 20 | 2520 | 261 | 23 |
| 780 | 237 | 21 | 2580 | 258 | 22 |
| 840 | 238 | 22 | 2640 | 257 | 21 |
| 900 | 239 | 23 | 2700 | 256 | 20 |
| 960 | 240 | 25 | 2760 | 259 | 20 |
| 1020 | 240 | 26 | 2820 | 261 | 21 |
| 1080 | 241 | 26 | 2880 | 263 | 21 |
| 1140 | 242 | 26 | 2940 | 265 | 22 |
| 1200 | 245 | 25 | 3000 | 266 | 23 |
| 1260 | 247 | 24 | | | |
| 1320 | 249 | 23 | | | |
| 1380 | 251 | 21 | | | |
| 1440 | 253 | 19 | | | |
| 1500 | 255 | 17 | | | |
| 1560 | 257 | 16 | | | |
| 1620 | 257 | 17 | | | |
| 1680 | 256 | 18 | | | |
| 1740 | 256 | 20 | | | |

JALLEN

30 Nov 82

0900

451,560.00

465,177.00

4051.00

| SFC | 000 | 00 | 1800 | 243 | 34 |
|------|-----|----|------|-----|----|
| 60 | 165 | 05 | 1860 | 245 | 33 |
| 120 | 165 | 09 | 1920 | 248 | 30 |
| 130 | 165 | 14 | 1930 | 251 | 27 |
| 240 | 173 | 15 | 2040 | 252 | 27 |
| 300 | 130 | 17 | 2100 | 252 | 22 |
| 360 | 186 | 18 | 2160 | 252 | 29 |
| 420 | 192 | 19 | 2220 | 252 | 32 |
| 480 | 198 | 20 | 2280 | 252 | 35 |
| 540 | 203 | 20 | 2340 | 253 | 37 |
| 600 | 209 | 19 | 2400 | 255 | 39 |
| 660 | 214 | 18 | 2460 | 256 | 41 |
| 720 | 219 | 18 | 2520 | 258 | 42 |
| 780 | 224 | 17 | 2580 | 259 | 43 |
| 840 | 228 | 17 | 2640 | 260 | 44 |
| 900 | 229 | 17 | 2700 | 260 | 45 |
| 960 | 229 | 18 | 2760 | 261 | 43 |
| 1020 | 223 | 19 | 2820 | 263 | 41 |
| 1080 | 227 | 20 | 2880 | 264 | 39 |
| 1140 | 227 | 22 | 2940 | 267 | 37 |
| 1200 | 228 | 23 | 3000 | 268 | 36 |
| 1260 | 230 | 25 | | | |
| 1320 | 232 | 26 | | | |
| 1380 | 234 | 27 | | | |
| 1440 | 236 | 28 | | | |
| 1500 | 237 | 29 | | | |
| 1560 | 238 | 30 | | | |
| 1620 | 239 | 32 | | | |
| 1680 | 240 | 34 | | | |
| 1740 | 241 | 35 | | | |

AIMING COMPUTER MET MESSAGE

30 Nov 82

JALLEN 0600 MST
METCM1332065
301300124872
00018003 27610872
01083004 27950862
02393004 28050836
03436010 27850796
04475008 27480748
05412012 27040703
06418016 26730660
07526019 26430619
08441011 26080580
09437012 25710543
10419014 25350508
11409015 24990475
12432019 24440428
13459021 23610371

STATION ALTITUDE 4051.00 FEET MSL
30 NOV. 82 0600 HRS MST
ASCENSION NO. 1d2

SIGNIFICANT LEVEL DATA
1340030100
JALLEN
TABLE 10

STATION COORDINATE
33°16'71.2 LAT UGC
106°49'31.1 LONG UGC

| PRESSURE GEOMETRIC MILLIBARS MSL FEET | ALTITUDE DEGREES | TEMPERATURE CENTIGRADE | AIR DEWPOINT CENTIGRADE | REL. HUM. PERCENT |
|--|---------------------|---------------------------|----------------------------|----------------------|
| 879.0 | 4051.0 | 2.1 | 3 | 88.0 |
| 866.7 | 4219.6 | 4.4 | 1.0 | 82.0 |
| 855.9 | 4557.2 | 7.3 | 2.0 | 69.0 |
| 850.0 | 4744.3 | 7.2 | 1.3 | 66.0 |
| 839.3 | 5247.7 | 6.3 | 2 | 65.0 |
| 824.0 | 5585.8 | 6.3 | 2 | 65.0 |
| 813.3 | 5934.7 | 6.1 | 0.8 | 61.0 |
| 788.9 | 7024.5 | 3.5 | -3.1 | 62.0 |
| 772.9 | 7298.8 | 2.7 | -5.2 | 65.0 |
| 760.9 | 7714.8 | 2.4 | -4.6 | 60.0 |
| 700.0 | 9906.5 | -3.7 | -7.8 | 73.0 |
| 673.8 | 10893.9 | -5.6 | -10.2 | 70.0 |
| 637.4 | 12320.8 | -7.5 | -15.4 | 53.0 |
| 626.6 | 12757.5 | -8.5 | -13.3 | 68.0 |
| 619.6 | 13043.7 | -9.1 | -14.0 | 64.0 |
| 611.2 | 13390.7 | -9.8 | -14.0 | 71.0 |
| 577.0 | 14643.1 | -13.0 | -22.6 | 44.0 |
| 560.6 | 15564.4 | -14.1 | -17.5 | 75.0 |
| 528.7 | 17015.6 | -18.2 | -18.9 | 94.0 |
| 513.3 | 17740.6 | -19.2 | -20.9 | 86.0 |
| 506.0 | 18381.3 | -20.7 | -25.1 | 81.0 |
| 479.7 | 19637.8 | -23.5 | -23.8 | 97.0 |
| 469.1 | 19923.1 | -23.8 | -24.6 | 91.0 |
| 459.9 | 20628.8 | -25.9 | -28.4 | 79.0 |
| 445.8 | 21246.6 | -26.6 | -34.1 | 49.0 |
| 425.5 | 22242.1 | -29.0 | -38.0 | 41.0 |
| 400.0 | 23605.8 | -32.5 | -38.6 | 54.0 |
| 349.4 | 27091.6 | -41.6 | | |
| 323.2 | 28498.6 | -45.2 | | |
| 300.0 | 30119.9 | -49.6 | | |
| 291.0 | 30774.6 | -50.6 | | |
| 275.6 | 31442.8 | -49.9 | | |
| 265.3 | 32023.2 | -51.1 | | |
| 257.3 | 33416.8 | -51.1 | | |
| 250.0 | 34032.8 | -51.4 | | |
| 237.0 | 35173.3 | -52.1 | | |
| 221.4 | 36630.2 | -50.6 | | |
| 209.6 | 37808.1 | -49.9 | | |
| 200.0 | 38816.8 | -50.5 | | |
| 193.4 | 40670.2 | -52.5 | | |

INITIAL ALTITUDE 4951.0 FEET MSL
30 DAY. 22 0600 HRS MST
ASCENSION NO. 102

SIGNIFICANT LEVEL DATA
33400301oc
TABLE 10 Cont'd

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE MSL | TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE | |
|-----------------------|------------------------------|---|----------------------|
| | | REL. HUM. PERCENT | REL. HUM. PERCENT |
| 172.0 | 42030.8 | -54.5 | |
| 162.4 | 43241.7 | -55.0 | |
| 150.0 | 44908.0 | -56.7 | |
| 135.6 | 47018.0 | -56.6 | |
| 114.4 | 50540.4 | -60.7 | |
| 100.0 | 53287.6 | -62.9 | |
| 89.8 | 55466.9 | -64.2 | |
| 84.1 | 56788.8 | -65.0 | |
| 77.3 | 58508.3 | -59.4 | |
| 72.8 | 59743.8 | -60.8 | |

STATION ALTITUDE 4051.00 FEET MSL
30 NOV. 82 0600 HRS WST
ASCESSION NO. 132

UPPER AIR DATA
3349030162
JALLEN
TABLE 11

GEOPHYSICAL COORDINATES,
33°16'12" LAT W
106°49'31" LONG W

| GEOMETRIC ALTITUDE MSL FEET | PR.SUMM. MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | DEWPOINT PERCENT | REL.HUM. GM/CUBIC METER | SITE OF SOUND KNOTS | WIND DIRECTION DEGREES FROM NORTH | WIND SPEED KNOTS | REFRACTIO- N |
|--------------------------------|-----------------------|---|---------------------|-------------------------------|---------------------------|--|---------------------|-----------------|
| 4051.0 | 872.2 | 2.1 | .3 | 88.0 | 1100.9 | 647.0 | 10.0 | 2.9 |
| 4500.0 | 857.7 | 6.8 | 2.0 | 71.2 | 1064.0 | 652.9 | 322.7 | 1.4 |
| 5000.0 | 842.0 | 6.7 | .7 | 65.5 | 1044.9 | 652.7 | 249.0 | 2.5 |
| 5500.0 | 826.5 | 6.3 | .2 | 65.0 | 1027.4 | 652.2 | 233.5 | 4.8 |
| 6000.0 | 811.3 | 5.9 | -1.0 | 61.1 | 1010.0 | 651.7 | 227.9 | 7.2 |
| 6500.0 | 796.5 | 4.8 | -2.0 | 61.5 | 995.7 | 650.5 | 244.7 | 8.5 |
| 7000.0 | 781.6 | 3.6 | -3.0 | 62.0 | 981.7 | 648.8 | 257.1 | 10.0 |
| 7500.0 | 767.1 | 2.6 | -3.8 | 62.6 | 967.0 | 647.0 | 259.2 | 10.9 |
| 8000.0 | 752.7 | 1.6 | -4.9 | 61.7 | 952.3 | 646.4 | 259.6 | 11.3 |
| 8500.0 | 738.5 | .2 | -5.6 | 64.7 | 939.2 | 644.8 | 255.0 | 10.4 |
| 9000.0 | 724.6 | -1.2 | -6.4 | 67.6 | 926.3 | 643.1 | 245.4 | 9.1 |
| 9500.0 | 710.9 | -2.6 | -7.2 | 70.6 | 913.5 | 641.4 | 237.9 | 9.3 |
| 10000.0 | 697.5 | -3.9 | -8.0 | 72.7 | 900.7 | 639.9 | 234.0 | 10.7 |
| 10500.0 | 684.1 | -4.8 | -9.2 | 71.2 | 886.8 | 638.7 | 235.4 | 12.3 |
| 11000.0 | 671.0 | -5.7 | -10.5 | 68.7 | 872.8 | 637.6 | 235.7 | 14.1 |
| 11500.0 | 658.1 | -6.4 | -12.3 | 62.8 | 858.5 | 636.7 | 244.6 | 14.7 |
| 12000.0 | 645.4 | -7.1 | -14.2 | 56.8 | 844.0 | 635.9 | 260.2 | 15.9 |
| 12500.0 | 632.9 | -7.9 | -14.5 | 59.2 | 830.3 | 634.9 | 278.8 | 17.5 |
| 13000.0 | 620.7 | -9.0 | -14.4 | 64.6 | 817.6 | 633.5 | 285.0 | 18.2 |
| 13500.0 | 608.6 | -10.0 | -14.6 | 69.0 | 804.8 | 632.3 | 265.2 | 17.6 |
| 14000.0 | 396.6 | -11.1 | -17.4 | 59.7 | 792.5 | 630.9 | 272.6 | 14.6 |
| 14500.0 | 584.9 | -12.2 | -20.4 | 50.4 | 780.4 | 629.5 | 260.7 | 12.7 |
| 15000.0 | 573.4 | -13.2 | -21.3 | 50.7 | 768.0 | 628.3 | 247.9 | 11.9 |
| 15500.0 | 562.0 | -14.0 | -17.9 | 72.2 | 754.8 | 627.5 | 238.1 | 11.4 |
| 16000.0 | 550.8 | -15.3 | -17.9 | 80.7 | 745.5 | 625.5 | 235.4 | 11.5 |
| 16500.0 | 539.8 | -16.7 | -18.4 | 87.2 | 732.7 | 624.1 | 233.5 | 11.6 |
| 17000.0 | 529.0 | -18.2 | -18.9 | 95.8 | 722.0 | 622.4 | 232.3 | 12.4 |
| 17500.0 | 518.4 | -18.9 | -20.3 | 88.7 | 709.5 | 621.5 | 231.4 | 13.2 |
| 18000.0 | 507.9 | -19.8 | -21.8 | 84.0 | 697.8 | 620.3 | 232.0 | 13.6 |
| 18500.0 | 497.6 | -21.0 | -23.1 | 82.5 | 686.8 | 618.9 | 234.2 | 14.0 |
| 19000.0 | 487.4 | -22.1 | -23.4 | 88.9 | 675.8 | 617.5 | 235.7 | 14.2 |
| 19500.0 | 477.4 | -23.2 | -23.7 | 95.2 | 664.9 | 616.1 | 237.2 | 14.3 |
| 20000.0 | 467.6 | -24.0 | -25.2 | 89.7 | 653.4 | 615.1 | 236.6 | 14.3 |
| 20500.0 | 457.9 | -25.4 | -27.7 | 81.6 | 643.7 | 613.3 | 239.9 | 15.6 |
| 21000.0 | 448.4 | -26.3 | -31.4 | 61.6 | 632.6 | 612.2 | 241.1 | 17.0 |
| 21500.0 | 439.1 | -27.2 | -35.0 | 47.0 | 621.8 | 611.0 | 242.8 | 18.1 |
| 22000.0 | 429.9 | -28.4 | -37.0 | 42.9 | 611.8 | 609.5 | 245.2 | 16.9 |
| 22500.0 | 420.8 | -29.6 | -39.1 | 43.3 | 601.9 | 608.0 | 247.3 | 19.7 |
| 23000.0 | 411.9 | -30.8 | -38.2 | 47.8 | 592.1 | 606.1 | 250.1 | 19.9 |
| 23500.0 | 402.0 | -32.0 | -58.5 | 52.3 | 582.5 | 605.0 | 252.1 | 20.2 |

STATION ALTITUDE 4051.00 FT. 1.00 SL.
30 NOV. 08⁰⁰ 0600 HRS. 1.00
ASCENTION HGT. 132

WEATHER AIR DATA
3340030182
JALIFN
TIME 11 CONC'D

GEOMETRIC COORDINATES
33.16712 LAT LG
106.49511 LONG LG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE KILLOPAS | TEMPERATURE AIR DEWPOINT DEGREES CENIGRADE | REL.HUM. PERCENT | SOUND KNOTS METER | DENSITY GM/CUBIC METER | SPED OF WIND DATA KNOTS MILES/HOUR | WEATHER REFRACTION |
|--------------------------------|----------------------|---|---------------------|-------------------------|------------------------------|---|-----------------------|
| 29000.0 | 394.5 | -13.3 | -40.3 | 49.0** | 575.0 | 803.3 | 20.7 |
| 29500.0 | 395.9 | -14.7 | -43.2 | 41.1** | 565.7 | 601.6 | 21.4 |
| 29000.0 | 397.6 | -16.0 | -46.4 | 33.2** | 554.6 | 600.0 | 22.0 |
| 29500.0 | 369.3 | -17.3 | -49.9 | 25.2** | 545.6 | 598.2 | 22.1 |
| 29000.0 | 361.3 | -18.7 | -54.2 | 17.3** | 536.8 | 596.5 | 22.3 |
| 29500.0 | 353.5 | -40.0 | -60.2 | 9.4** | 528.2 | 594.8 | 200.0 |
| 27000.0 | 345.3 | -11.4 | -74.3 | 1.5** | 519.7 | 593.1 | 259.5 |
| 27500.0 | 336.1 | -12.6 | -43.9 | 511.0 | 591.5 | 259.1 | 22.5 |
| 28000.0 | 330.6 | -11.1 | -43.9 | 502.4 | 589.8 | 257.5 | 21.9 |
| 28500.0 | 323.2 | -11.5 | -5.2 | 493.9 | 588.2 | 255.4 | 21.2 |
| 29000.0 | 315.8 | -16.6 | -50.6 | 485.6 | 586.4 | 253.8 | 20.9 |
| 29500.0 | 308.7 | -17.9 | -51.7 | 477.4 | 584.7 | 254.1 | 21.7 |
| 30000.0 | 301.7 | -49.3 | -50.3 | 469.4 | 582.9 | 254.4 | 22.5 |
| 30500.0 | 294.7 | -50.3 | -50.3 | 460.7 | 581.6 | 253.0 | 22.6 |
| 31000.0 | 288.0 | -50.6 | -50.6 | 450.8 | 581.1 | 252.4 | 22.6 |
| 31500.0 | 281.3 | -50.2 | -50.2 | 439.7 | 581.6 | 251.5 | 22.4 |
| 32000.0 | 274.9 | -50.0 | -50.0 | 429.0 | 582.0 | 251.2 | 21.9 |
| 32500.0 | 268.5 | -50.6 | -50.6 | 420.3 | 581.2 | 250.9 | 21.5 |
| 33000.0 | 262.1 | -51.1 | -51.1 | 411.6 | 580.5 | 250.5 | 21.4 |
| 33500.0 | 256.5 | -51.1 | -51.1 | 402.2 | 580.5 | 250.2 | 21.4 |
| 34000.0 | 250.4 | -51.4 | -51.4 | 393.3 | 580.2 | 249.8 | 21.5 |
| 34500.0 | 244.6 | -51.7 | -51.7 | 384.7 | 579.8 | 241.7 | 21.1 |
| 35000.0 | 238.9 | -52.0 | -52.0 | 376.4 | 579.4 | 232.4 | 21.1 |
| 35500.0 | 233.4 | -51.8 | -51.8 | 367.3 | 579.7 | 233.7 | 21.7 |
| 36000.0 | 228.0 | -51.2 | -51.2 | 358.0 | 580.3 | 217.2 | 22.1 |
| 36500.0 | 222.8 | -50.7 | -50.7 | 348.9 | 581.0 | 211.1 | 22.8 |
| 37000.0 | 217.6 | -50.4 | -50.4 | 340.3 | 581.5 | 206.4 | 23.1 |
| 37500.0 | 212.6 | -50.1 | -50.1 | 332.1 | 581.9 | 203.1 | 22.8 |
| 38000.0 | 207.7 | -50.0 | -50.0 | 324.3 | 581.9 | 199.9 | 22.1 |
| 38500.0 | 203.0 | -50.3 | -50.3 | 317.3 | 581.6 | 199.1 | 23.6 |
| 39000.0 | 198.3 | -50.7 | -50.7 | 310.5 | 581.1 | 198.5 | 25.2 |
| 39500.0 | 193.7 | -51.2 | -51.2 | 304.1 | 580.3 | 202.0 | 24.4 |
| 40000.0 | 189.2 | -51.8 | -51.8 | 297.8 | 579.8 | 209.6 | 22.1 |
| 40500.0 | 184.9 | -52.3 | -52.3 | 291.6 | 578.9 | 219.0 | 20.4 |
| 41000.0 | 180.6 | -53.0 | -53.0 | 285.7 | 578.1 | 229.4 | 19.2 |
| 41500.0 | 176.4 | -53.7 | -53.7 | 280.0 | 577.1 | 240.4 | 18.6 |
| 42000.0 | 172.3 | -54.5 | -54.5 | 274.4 | 576.1 | 246.6 | 18.0 |
| 42500.0 | 168.2 | -49.7 | -49.7 | 268.2 | 575.0 | 245.1 | 19.2 |
| 43000.0 | 164.3 | -54.9 | -54.9 | 262.2 | 575.5 | 244.1 | 19.5 |
| 43500.0 | 160.4 | -55.3 | -55.3 | 256.5 | 575.1 | 250.4 | 19.1 |

** AT LEAST ONE SIGHTED RELATIVE HUMIDITY VALUE WAS USED IN THIS COMPUTATION.

STATION ALTITUDE 4051.00 FT MSL
30 NOV. 82 0601 HRS EST
ASCRIBED NO. 132

UPPER AIR DATA
1340030182
JALLEN

TABLE 11 Cont'd

EFOLTEC COMPUTATIONS
33-10112 LAT 49
106.49511 LON 160

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEPOINT DEGREES CELSIUS | TEMPERATURE DEGREE CELSIUS | REL.HUM. PERCENT | SPEED OF SOUND METER KNOTS | WIND DATA DIRECTION DEGREES (TRI) SPEED KNOTS | INFLUX OF REFRACTION |
|--------------------------------|-----------------------|---|-------------------------------|---------------------|-------------------------------------|---|----------------------------|
| 44000.0 | 150.6 | -55.8 | -55.8 | 251.0 | 574.4 | 258.0 | 10.9 |
| 44500.0 | 152.9 | -56.3 | -56.3 | 245.7 | 573.7 | 264.6 | 18.6 |
| 45000.0 | 149.3 | -56.7 | -56.7 | 240.4 | 573.2 | 271.7 | 18.6 |
| 45500.0 | 145.8 | -56.7 | -56.7 | 234.6 | 573.2 | 250.5 | 16.8 |
| 46000.0 | 142.4 | -56.6 | -56.6 | 229.1 | 573.2 | 235.3 | 16.8 |
| 46500.0 | 139.5 | -56.6 | -56.6 | 223.6 | 573.3 | 224.4 | 17.9 |
| 47000.0 | 135.7 | -56.6 | -56.6 | 216.3 | 573.3 | 216.8 | 19.3 |
| 47500.0 | 132.5 | -57.2 | -57.2 | 213.7 | 572.5 | 219.5 | 19.1 |
| 48000.0 | 129.3 | -57.7 | -57.7 | 209.1 | 571.8 | 229.4 | 18.0 |
| 48500.0 | 126.2 | -58.3 | -58.3 | 204.7 | 571.0 | 236.2 | 17.7 |
| 49000.0 | 123.2 | -58.9 | -58.9 | 200.4 | 570.2 | 237.6 | 17.8 |
| 49500.0 | 120.3 | -59.5 | -59.5 | 196.1 | 569.5 | 238.6 | 18.0 |
| 50000.0 | 117.4 | -60.1 | -60.1 | 192.0 | 568.7 | 237.9 | 18.6 |
| 50500.0 | 114.6 | -60.7 | -60.7 | 187.9 | 567.9 | 237.3 | 19.2 |
| 51000.0 | 111.9 | -61.1 | -61.1 | 183.7 | 567.3 | 242.3 | 18.9 |
| 51500.0 | 109.1 | -61.5 | -61.5 | 179.6 | 566.8 | 248.4 | 18.7 |
| 52000.0 | 106.5 | -61.9 | -61.9 | 175.6 | 566.3 | 252.4 | 16.5 |
| 52500.0 | 103.9 | -62.3 | -62.3 | 171.7 | 565.7 | 255.4 | 12.8 |
| 53000.0 | 101.4 | -62.7 | -62.7 | 167.9 | 565.2 | 255.1 | 10.3 |
| 53500.0 | 99.0 | -63.0 | -63.0 | 164.1 | 564.7 | 242.9 | 11.9 |
| 54000.0 | 96.5 | -63.3 | -63.3 | 160.3 | 564.3 | 234.3 | 12.5 |
| 54500.0 | 94.2 | -63.6 | -63.6 | 156.6 | 563.9 | 27.0 | 15.9 |
| 55000.0 | 91.9 | -63.9 | -63.9 | 153.0 | 563.5 | 258.6 | 19.4 |
| 55500.0 | 89.7 | -64.2 | -64.2 | 149.5 | 563.1 | 240.4 | 19.2 |
| 56000.0 | 87.5 | -64.5 | -64.5 | 146.0 | 562.7 | 242.0 | 19.0 |
| 56500.0 | 85.3 | -64.8 | -64.8 | 142.7 | 562.3 | 241.5 | 20.2 |
| 57000.0 | 83.2 | -64.3 | -64.3 | 138.8 | 563.0 | 240.6 | 21.7 |
| 57500.0 | 81.2 | -62.7 | -62.7 | 134.4 | 565.2 | 247.0 | 18.3 |
| 58000.0 | 79.3 | -61.1 | -61.1 | 130.2 | 567.4 | 254.1 | 15.8 |
| 58500.0 | 77.5 | -59.4 | -59.4 | 126.0 | 569.5 | 251.2 | 16.2 |
| 59000.0 | 75.5 | -58.0 | -58.0 | 123.3 | 568.6 | 250.7 | 15.8 |
| 59500.0 | 73.7 | -58.5 | -58.5 | 120.7 | 568.1 | 1.000027 | 1.000027 |

STATION ALTITUDE 4051.0 FEET MSL
30 NOV. 02 0600 HRS MST
ACCELERATION 4.0. 102

MANOMETRIC LEVELS
53400.30 INCH
JALLEN
TABLE 12

GEOMETRIC COORDINATES
33.1671° LAT. JR.
106.49511 LONG. LEG

| PRESSURE OF POTENTIAL MILLIBARS | EFFECT | PRESSURE OF POTENTIAL DEGREES CENTIGRADE | TEMPERATURE DEGREES CENTIGRADE | REL. HUM. PERCENT | WIND DATA DEGREES (IN) SPEED KNOTS |
|------------------------------------|--------|---|-----------------------------------|----------------------|---|
| 50.0.0 | 4741. | 7.2 | 1.3 | 60. | 275.3 1.6 |
| 80.0.0 | 6373. | 5.0 | -1.7 | 61. | 240.6 6.1 |
| 75.0.0 | 8001. | 1.3 | -5.1 | 62. | 259.9 11.4 |
| 70.0.0 | 9078. | -3.7 | -7.8 | 73. | 235.2 10.5 |
| 65.0.0 | 11807. | -6.8 | -13.5 | 59. | 258.7 15.2 |
| 60.0.0 | 13844. | -10.8 | -16.6 | 62. | 276.6 15.4 |
| 55.0.0 | 16021. | -15.4 | -17.9 | 81. | 235.2 11.5 |
| 50.0.0 | 18357. | -20.7 | -23.1 | 81. | 233.6 13.9 |
| 45.0.0 | 20887. | -26.2 | -30.7 | 66. | 240.9 16.7 |
| 40.0.0 | 23649. | -32.5 | -36.6 | 54. | 253.6 20.3 |
| 35.0.0 | 26685. | -40.6 | -64.2 | 6.*** | 254.8 22.4 |
| 30.0.0 | 30063. | -49.6 | | | 254.5 22.7 |
| 25.0.0 | 33963. | -51.4 | | | 249.8 21.5 |
| 20.0.0 | 38728. | -50.5 | | | 196.6 24.7 |
| 17.5.0 | 41564. | -54.0 | | | 243.5 18.6 |
| 15.0.0 | 44792. | -56.7 | | | 270.2 18.6 |
| 12.5.0 | 48578. | -58.6 | | | 236.8 17.8 |
| 10.0.0 | 53129. | -62.9 | | | 246.4 18.6 |
| 8.0.0 | 57618. | -61.7 | | | 251.8 18.6 |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION NUMBER 41260-9 FIFTY-FIVE
30 AUG. 1950
ASBESTOS 100. 315

SIGNIFICANT LEVEL DATA
340010315
HOLLOWELL
TABLE 13

STATION POINTS
30 AUG. 1950
ASBESTOS 100. 315

| POINT NUMBER | ELEVATION | FORMER | ALTITUDE | TEMPERATURE | | |
|--------------|-----------|--------|----------|-------------|-------|-----------------|
| | | | | AIR | WATER | DEGREES CELSIUS |
| 871.0 | 4126.6 | 4.7 | 2.1 | 6.5.0 | 6.5.0 | 6.5.0 |
| 869.2 | 4463.2 | 8.3 | 1.5 | 6.5.0 | 6.5.0 | 6.5.0 |
| 859.0 | 4787.4 | 8.0 | 1.0 | 5.5.0 | 5.5.0 | 5.5.0 |
| 842.4 | 5031.2 | 8.4 | 0.5 | 5.5.0 | 5.5.0 | 5.5.0 |
| 792.0 | 6701.3 | 5.4 | -2.2 | 5.5.0 | 5.5.0 | 5.5.0 |
| 745.4 | 8716.7 | 7.7 | -3.2 | 7.5.0 | 7.5.0 | 7.5.0 |
| 706.0 | 9767.4 | -2.2 | -7.9 | 6.5.0 | 6.5.0 | 6.5.0 |
| 673.1 | 16986.6 | -4.5 | -10.2 | 7.5.0 | 7.5.0 | 7.5.0 |
| 621.1 | 13053.0 | -8.6 | -16.2 | 5.5.0 | 5.5.0 | 5.5.0 |
| 603.7 | 15774.9 | -10.4 | -16.0 | 5.5.0 | 5.5.0 | 5.5.0 |
| 587.1 | 14679.1 | -11.9 | -12.4 | 5.5.0 | 5.5.0 | 5.5.0 |
| 553.9 | 15936.3 | -15.1 | -16.1 | 5.5.0 | 5.5.0 | 5.5.0 |
| 508.0 | 18457.3 | -20.3 | -22.2 | 5.5.0 | 5.5.0 | 5.5.0 |
| 451.9 | 20892.7 | -26.4 | -26.7 | 4.5.0 | 4.5.0 | 4.5.0 |
| 449.5 | 21490.2 | -28.2 | -26.6 | 4.5.0 | 4.5.0 | 4.5.0 |
| 429.5 | 22094.5 | -28.8 | -35.4 | 6.5.0 | 6.5.0 | 6.5.0 |
| 406.0 | 23756.5 | -32.8 | -37.7 | 6.5.0 | 6.5.0 | 6.5.0 |
| 365.0 | 25798.9 | -37.9 | -44.4 | 5.5.0 | 5.5.0 | 5.5.0 |
| 336.2 | 27699.8 | -42.5 | | | | |
| 324.9 | 28457.4 | -44.1 | | | | |
| 312.8 | 29293.1 | -45.4 | | | | |
| 309.0 | 30209.0 | -46.2 | | | | |
| 282.0 | 31552.8 | -47.3 | | | | |
| 275.4 | 32045.0 | -46.4 | | | | |
| 266.0 | 32762.0 | -46.6 | | | | |
| 250.0 | 34182.5 | -49.4 | | | | |
| 235.4 | 35474.0 | -51.9 | | | | |
| 232.6 | 35730.3 | -50.4 | | | | |
| 213.0 | 37620.7 | -50.7 | | | | |
| 202.6 | 38676.2 | -52.4 | | | | |
| 206.0 | 38766.8 | -51.8 | | | | |
| 187.4 | 40330.7 | -52.9 | | | | |
| 172.8 | 42076.7 | -53.1 | | | | |
| 167.4 | 42702.0 | -52.1 | | | | |
| 152.4 | 44742.5 | -55.1 | | | | |
| 150.0 | 45077.0 | -54.7 | | | | |
| 115.6 | 50463.1 | -60.6 | | | | |
| 106.3 | 5134.2 | -61.8 | | | | |
| 105.7 | 52139.1 | -60.5 | | | | |
| 100.0 | 53467.6 | -61.8 | | | | |

STATISTICS, 411110, 4120, 40, FEB 1, 1951
30 AUG. 1951
ASST. SIGN 10. 313

TABLE 13. *Cont'd.*

ST. LOUIS COCA-COLA CO.
520 BROAD ST.
106-108 LOMBARD

TABLE 13 Cont'd

| PRESSURE, GRAMMATIC | TEMPERATURE, AIR, DEGREES CENTIGRADE | WIND, PLATEAU |
|---------------------------------|---|---------------|
| ALTITUDE, MILLIBARS MSL FELL | DEGREES | PLATEAU |
| 91.5 | 55270.9 | -64.4 |
| 82.0 | 57265.5 | -63.8 |
| 77.4 | 58236.0 | -60.0 |
| 70.0 | 60234.7 | -61.0 |
| 60.5 | 63213.3 | -63.0 |
| 50.0 | 65247.0 | -60.8 |
| 50.0 | 67262.0 | -58.5 |
| 45.0 | 69204.5 | -60.9 |
| 37.4 | 73260.9 | -57.5 |
| 32.7 | 76213.3 | -60.9 |
| 31.7 | 77260.7 | -58.3 |
| 30.0 | 78203.0 | -60.1 |
| 28.4 | 79239.2 | -58.2 |
| 27.1 | 80228.3 | -52.3 |
| 25.2 | 81277.1 | -54.2 |
| 20.0 | 86240.9 | -48.9 |
| 16.5 | 91223.0 | -49.0 |

STATE OF DELAWARE DEPARTMENT OF AGRICULTURE, No. 313

TABLE 14

ST. LOUIS COORDINATES
52° 00' 06" LAT 116°
106° 09' 06" LONG 116°

| Geographic Area | | Population | | Demographic | | Demographic | | Demographic | | Demographic | | Demographic | | Demographic | | |
|-----------------|---------------|------------|------|-------------|---------|-------------|--------|-------------|-------|-------------|--------|-------------|-------|-------------|--------|-----|
| Alitude | Altitude | Air Temp | Temp | Percent | Percent | Gender | Gender | Age | Age | Gender | Gender | Age | Age | Gender | Gender | |
| 0-126.6 | 0-126.6 | 371.0 | 4.7 | 2.1 | 43.0 | 61.5 | 61.5 | 108.0 | 108.0 | 65.0 | 65.0 | 165.0 | 165.0 | 6.0 | 6.0 | |
| 126.7-250.0 | 126.7-250.0 | 372.0 | 4.6 | 1.4 | 53.7 | 53.7 | 53.7 | 105.9 | 105.9 | 65.0 | 65.0 | 165.0 | 165.0 | 6.1 | 6.1 | |
| 250.1-375.0 | 250.1-375.0 | 373.0 | 4.5 | 4.4 | 54.4 | 103.7 | 103.7 | 102.2 | 102.2 | 65.0 | 65.0 | 164.0 | 164.0 | 6.4 | 6.4 | |
| 375.1-500.0 | 375.1-500.0 | 374.0 | 4.4 | 7.1 | 1.1 | 55.0 | 102.1 | 102.1 | 101.9 | 101.9 | 65.0 | 65.0 | 163.5 | 163.5 | 6.6 | 6.6 |
| 500.1-625.0 | 500.1-625.0 | 375.0 | 4.3 | 5.9 | 56.4 | 101.1 | 101.1 | 100.7 | 100.7 | 65.0 | 65.0 | 163.0 | 163.0 | 6.7 | 6.7 | |
| 625.1-750.0 | 625.1-750.0 | 376.0 | 4.2 | 1.9 | 57.4 | 100.3 | 100.3 | 99.5 | 99.5 | 65.0 | 65.0 | 162.5 | 162.5 | 6.9 | 6.9 | |
| 750.1-875.0 | 750.1-875.0 | 377.0 | 4.1 | 1.9 | 61.1 | 98.0 | 98.0 | 97.0 | 97.0 | 65.0 | 65.0 | 162.0 | 162.0 | 7.0 | 7.0 | |
| 875.1-1000.0 | 875.1-1000.0 | 378.0 | 4.0 | 2.3 | 66.4 | 96.0 | 96.0 | 95.9 | 95.9 | 65.0 | 65.0 | 161.5 | 161.5 | 7.1 | 7.1 | |
| 1000.1-1125.0 | 1000.1-1125.0 | 379.0 | 3.9 | 3.1 | 72.0 | 92.0 | 92.0 | 91.5 | 91.5 | 65.0 | 65.0 | 161.0 | 161.0 | 7.2 | 7.2 | |
| 1125.1-1250.0 | 1125.1-1250.0 | 380.0 | 3.8 | 1.6 | 71.7 | 92.9 | 92.9 | 92.0 | 92.0 | 65.0 | 65.0 | 160.5 | 160.5 | 7.3 | 7.3 | |
| 1250.1-1375.0 | 1250.1-1375.0 | 381.0 | 3.7 | 1.7 | 73.9 | 91.4 | 91.4 | 90.5 | 90.5 | 65.0 | 65.0 | 160.0 | 160.0 | 7.4 | 7.4 | |
| 1375.1-1500.0 | 1375.1-1500.0 | 382.0 | 3.6 | 1.7 | 70.9 | 90.1 | 90.1 | 89.5 | 89.5 | 65.0 | 65.0 | 159.5 | 159.5 | 7.5 | 7.5 | |
| 1500.1-1625.0 | 1500.1-1625.0 | 383.0 | 3.5 | 1.8 | 67.8 | 89.0 | 89.0 | 88.0 | 88.0 | 65.0 | 65.0 | 159.0 | 159.0 | 7.6 | 7.6 | |
| 1625.1-1750.0 | 1625.1-1750.0 | 384.0 | 3.4 | 1.9 | 65.3 | 87.5 | 87.5 | 86.5 | 86.5 | 65.0 | 65.0 | 158.5 | 158.5 | 7.7 | 7.7 | |
| 1750.1-1875.0 | 1750.1-1875.0 | 385.0 | 3.3 | 1.9 | 61.1 | 86.0 | 86.0 | 85.0 | 85.0 | 65.0 | 65.0 | 158.0 | 158.0 | 7.8 | 7.8 | |
| 1875.1-2000.0 | 1875.1-2000.0 | 386.0 | 3.2 | 2.0 | 57.4 | 84.5 | 84.5 | 83.5 | 83.5 | 65.0 | 65.0 | 157.5 | 157.5 | 7.9 | 7.9 | |
| 2000.1-2125.0 | 2000.1-2125.0 | 387.0 | 3.1 | 2.0 | 52.9 | 83.0 | 83.0 | 82.0 | 82.0 | 65.0 | 65.0 | 157.0 | 157.0 | 8.0 | 8.0 | |
| 2125.1-2250.0 | 2125.1-2250.0 | 388.0 | 3.0 | 2.1 | 49.6 | 81.5 | 81.5 | 80.5 | 80.5 | 65.0 | 65.0 | 156.5 | 156.5 | 8.1 | 8.1 | |
| 2250.1-2375.0 | 2250.1-2375.0 | 389.0 | 2.9 | 2.1 | 46.4 | 80.0 | 80.0 | 79.0 | 79.0 | 65.0 | 65.0 | 156.0 | 156.0 | 8.2 | 8.2 | |
| 2375.1-2500.0 | 2375.1-2500.0 | 390.0 | 2.8 | 2.2 | 43.2 | 78.5 | 78.5 | 77.5 | 77.5 | 65.0 | 65.0 | 155.5 | 155.5 | 8.3 | 8.3 | |
| 2500.1-2625.0 | 2500.1-2625.0 | 391.0 | 2.7 | 2.2 | 40.0 | 77.0 | 77.0 | 76.0 | 76.0 | 65.0 | 65.0 | 155.0 | 155.0 | 8.4 | 8.4 | |
| 2625.1-2750.0 | 2625.1-2750.0 | 392.0 | 2.6 | 2.3 | 37.8 | 75.5 | 75.5 | 74.5 | 74.5 | 65.0 | 65.0 | 154.5 | 154.5 | 8.5 | 8.5 | |
| 2750.1-2875.0 | 2750.1-2875.0 | 393.0 | 2.5 | 2.3 | 35.6 | 74.0 | 74.0 | 73.0 | 73.0 | 65.0 | 65.0 | 154.0 | 154.0 | 8.6 | 8.6 | |
| 2875.1-3000.0 | 2875.1-3000.0 | 394.0 | 2.4 | 2.4 | 33.4 | 72.5 | 72.5 | 71.5 | 71.5 | 65.0 | 65.0 | 153.5 | 153.5 | 8.7 | 8.7 | |
| 3000.1-3125.0 | 3000.1-3125.0 | 395.0 | 2.3 | 2.4 | 31.2 | 71.0 | 71.0 | 70.0 | 70.0 | 65.0 | 65.0 | 153.0 | 153.0 | 8.8 | 8.8 | |
| 3125.1-3250.0 | 3125.1-3250.0 | 396.0 | 2.2 | 2.5 | 29.0 | 69.5 | 69.5 | 68.5 | 68.5 | 65.0 | 65.0 | 152.5 | 152.5 | 8.9 | 8.9 | |
| 3250.1-3375.0 | 3250.1-3375.0 | 397.0 | 2.1 | 2.5 | 26.8 | 68.0 | 68.0 | 67.0 | 67.0 | 65.0 | 65.0 | 152.0 | 152.0 | 9.0 | 9.0 | |
| 3375.1-3500.0 | 3375.1-3500.0 | 398.0 | 2.0 | 2.6 | 24.6 | 66.5 | 66.5 | 65.5 | 65.5 | 65.0 | 65.0 | 151.5 | 151.5 | 9.1 | 9.1 | |
| 3500.1-3625.0 | 3500.1-3625.0 | 399.0 | 1.9 | 2.6 | 22.4 | 65.0 | 65.0 | 64.0 | 64.0 | 65.0 | 65.0 | 151.0 | 151.0 | 9.2 | 9.2 | |
| 3625.1-3750.0 | 3625.1-3750.0 | 400.0 | 1.8 | 2.7 | 20.2 | 63.5 | 63.5 | 62.5 | 62.5 | 65.0 | 65.0 | 150.5 | 150.5 | 9.3 | 9.3 | |
| 3750.1-3875.0 | 3750.1-3875.0 | 401.0 | 1.7 | 2.7 | 18.0 | 62.0 | 62.0 | 61.0 | 61.0 | 65.0 | 65.0 | 150.0 | 150.0 | 9.4 | 9.4 | |
| 3875.1-4000.0 | 3875.1-4000.0 | 402.0 | 1.6 | 2.8 | 15.8 | 60.5 | 60.5 | 59.5 | 59.5 | 65.0 | 65.0 | 149.5 | 149.5 | 9.5 | 9.5 | |
| 4000.1-4125.0 | 4000.1-4125.0 | 403.0 | 1.5 | 2.8 | 13.6 | 59.0 | 59.0 | 58.0 | 58.0 | 65.0 | 65.0 | 149.0 | 149.0 | 9.6 | 9.6 | |
| 4125.1-4250.0 | 4125.1-4250.0 | 404.0 | 1.4 | 2.9 | 11.4 | 57.5 | 57.5 | 56.5 | 56.5 | 65.0 | 65.0 | 148.5 | 148.5 | 9.7 | 9.7 | |
| 4250.1-4375.0 | 4250.1-4375.0 | 405.0 | 1.3 | 2.9 | 9.2 | 56.0 | 56.0 | 55.0 | 55.0 | 65.0 | 65.0 | 148.0 | 148.0 | 9.8 | 9.8 | |
| 4375.1-4500.0 | 4375.1-4500.0 | 406.0 | 1.2 | 3.0 | 7.0 | 54.5 | 54.5 | 53.5 | 53.5 | 65.0 | 65.0 | 147.5 | 147.5 | 9.9 | 9.9 | |
| 4500.1-4625.0 | 4500.1-4625.0 | 407.0 | 1.1 | 3.0 | 4.8 | 53.0 | 53.0 | 52.0 | 52.0 | 65.0 | 65.0 | 147.0 | 147.0 | 10.0 | 10.0 | |
| 4625.1-4750.0 | 4625.1-4750.0 | 408.0 | 1.0 | 3.1 | 2.6 | 51.5 | 51.5 | 50.5 | 50.5 | 65.0 | 65.0 | 146.5 | 146.5 | 10.1 | 10.1 | |
| 4750.1-4875.0 | 4750.1-4875.0 | 409.0 | 0.9 | 3.1 | 0.4 | 50.0 | 50.0 | 49.0 | 49.0 | 65.0 | 65.0 | 146.0 | 146.0 | 10.2 | 10.2 | |
| 4875.1-5000.0 | 4875.1-5000.0 | 410.0 | 0.8 | 3.2 | -1.6 | 48.5 | 48.5 | 47.5 | 47.5 | 65.0 | 65.0 | 145.5 | 145.5 | 10.3 | 10.3 | |
| 5000.1-5125.0 | 5000.1-5125.0 | 411.0 | 0.7 | 3.2 | -3.4 | 47.0 | 47.0 | 46.0 | 46.0 | 65.0 | 65.0 | 145.0 | 145.0 | 10.4 | 10.4 | |
| 5125.1-5250.0 | 5125.1-5250.0 | 412.0 | 0.6 | 3.3 | -5.2 | 45.5 | 45.5 | 44.5 | 44.5 | 65.0 | 65.0 | 144.5 | 144.5 | 10.5 | 10.5 | |
| 5250.1-5375.0 | 5250.1-5375.0 | 413.0 | 0.5 | 3.3 | -7.0 | 44.0 | 44.0 | 43.0 | 43.0 | 65.0 | 65.0 | 144.0 | 144.0 | 10.6 | 10.6 | |
| 5375.1-5500.0 | 5375.1-5500.0 | 414.0 | 0.4 | 3.4 | -8.8 | 42.5 | 42.5 | 41.5 | 41.5 | 65.0 | 65.0 | 143.5 | 143.5 | 10.7 | 10.7 | |
| 5500.1-5625.0 | 5500.1-5625.0 | 415.0 | 0.3 | 3.4 | -10.6 | 41.0 | 41.0 | 40.0 | 40.0 | 65.0 | 65.0 | 143.0 | 143.0 | 10.8 | 10.8 | |
| 5625.1-5750.0 | 5625.1-5750.0 | 416.0 | 0.2 | 3.5 | -12.4 | 39.5 | 39.5 | 38.5 | 38.5 | 65.0 | 65.0 | 142.5 | 142.5 | 10.9 | 10.9 | |
| 5750.1-5875.0 | 5750.1-5875.0 | 417.0 | 0.1 | 3.5 | -14.2 | 38.0 | 38.0 | 37.0 | 37.0 | 65.0 | 65.0 | 142.0 | 142.0 | 11.0 | 11.0 | |
| 5875.1-6000.0 | 5875.1-6000.0 | 418.0 | 0.0 | 3.6 | -16.0 | 36.5 | 36.5 | 35.5 | 35.5 | 65.0 | 65.0 | 141.5 | 141.5 | 11.1 | 11.1 | |
| 6000.1-6125.0 | 6000.1-6125.0 | 419.0 | -0.1 | 3.6 | -17.8 | 35.0 | 35.0 | 34.0 | 34.0 | 65.0 | 65.0 | 141.0 | 141.0 | 11.2 | 11.2 | |
| 6125.1-6250.0 | 6125.1-6250.0 | 420.0 | -0.2 | 3.7 | -19.6 | 33.5 | 33.5 | 32.5 | 32.5 | 65.0 | 65.0 | 140.5 | 140.5 | 11.3 | 11.3 | |
| 6250.1-6375.0 | 6250.1-6375.0 | 421.0 | -0.3 | 3.7 | -21.4 | 32.0 | 32.0 | 31.0 | 31.0 | 65.0 | 65.0 | 140.0 | 140.0 | 11.4 | 11.4 | |
| 6375.1-6500.0 | 6375.1-6500.0 | 422.0 | -0.4 | 3.8 | -23.2 | 30.5 | 30.5 | 29.5 | 29.5 | 65.0 | 65.0 | 139.5 | 139.5 | 11.5 | 11.5 | |
| 6500.1-6625.0 | 6500.1-6625.0 | 423.0 | -0.5 | 3.8 | -25.0 | 29.0 | 29.0 | 28.0 | 28.0 | 65.0 | 65.0 | 139.0 | 139.0 | 11.6 | 11.6 | |
| 6625.1-6750.0 | 6625.1-6750.0 | 424.0 | -0.6 | 3.9 | -26.8 | 27.5 | 27.5 | 26.5 | 26.5 | 65.0 | 65.0 | 138.5 | 138.5 | 11.7 | 11.7 | |
| 6750.1-6875.0 | 6750.1-6875.0 | 425.0 | -0.7 | 3.9 | -28.6 | 26.0 | 26.0 | 25.0 | 25.0 | 65.0 | 65.0 | 138.0 | 138.0 | 11.8 | 11.8 | |
| 6875.1-7000.0 | 6875.1-7000.0 | 426.0 | -0.8 | 4.0 | -30.4 | 24.5 | 24.5 | 23.5 | 23.5 | 65.0 | 65.0 | 137.5 | 137.5 | 11.9 | 11.9 | |
| 7000.1-7125.0 | 7000.1-7125.0 | 427.0 | -0.9 | 4.0 | -32.2 | 23.0 | 23.0 | 22.0 | 22.0 | 65.0 | 65.0 | 137.0 | 137.0 | 12.0 | 12.0 | |
| 7125.1-7250.0 | 7125.1-7250.0 | 428.0 | -1.0 | 4.1 | -34.0 | 21.5 | 21.5 | 20.5 | 20.5 | 65.0 | 65.0 | 136.5 | 136.5 | 12.1 | 12.1 | |
| 7250.1-7375.0 | 7250.1-7375.0 | 429.0 | -1.1 | 4.1 | -35.8 | 20.0 | 20.0 | 19.0 | 19.0 | 65.0 | 65.0 | 136.0 | 136.0 | 12.2 | 12.2 | |
| 7375.1-7500.0 | 7375.1-7500.0 | 430.0 | -1.2 | 4.2 | -37.6 | 18.5 | 18.5 | 17.5 | 17.5 | 65.0 | 65.0 | 135.5 | 135.5 | 12.3 | 12.3 | |
| 7500.1-7625.0 | 7500.1-7625.0 | 431.0 | -1.3 | 4.2 | -39.4 | 17.0 | 17.0 | 16.0 | 16.0 | 65.0 | 65.0 | 135.0 | 135.0 | 12.4 | 12.4 | |
| 7625.1-7750.0 | 7625.1-7750.0 | 432.0 | -1.4 | 4.3 | -41.2 | 15.5 | 15.5 | 14.5 | 14.5 | 65.0 | 65.0 | 134.5 | 134.5 | 12.5 | 12.5 | |
| 7750.1-7875.0 | 7750.1-7875.0 | 433.0 | -1.5 | 4.3 | -43.0 | 14.0 | 14.0 | 13.0 | 13.0 | 65.0 | 65.0 | 134.0 | 134.0 | 12.6 | 12.6 | |
| 7875.1-8000.0 | 7875.1-8000.0 | 434.0 | -1.6 | 4.4 | -44.8 | 12.5 | 12.5 | 11.5 | 11.5 | 65.0 | 65.0 | 133.5 | 133.5 | 12.7 | 12.7 | |
| 8000.1-8125.0 | 8000.1-8125.0 | 435.0 | -1.7 | 4.4 | -46.6 | 11.0 | 11.0 | 10.0 | 10.0 | 65.0 | 65.0 | 133.0 | 133.0 | 12.8 | 12.8 | |
| 8125.1-8250.0 | 8125.1-8250.0 | 436.0 | -1.8 | 4.5 | -48.4 | 9.5 | 9.5 | 8.5 | 8.5 | 65.0 | 65.0 | 132.5 | 132.5 | 12.9 | 12.9 | |
| 8250.1-8375.0 | 8250.1-8375.0 | 437.0 | -1.9 | 4.5 | -50.2 | 8.0 | 8.0 | 7.0 | 7.0 | 65.0 | 65.0 | 132.0 | 132.0 | 13.0 | 13.0 | |
| 8375.1-8500.0 | 8375.1-8500.0 | 438.0 | -2.0 | 4.6 | -52.0 | 6.5 | 6.5 | 5.5 | 5.5 | 65.0 | 65.0 | 131.5 | 131.5 | 13.1 | 13.1 | |
| 8500.1-8625.0 | 8500.1-8625.0 | 439.0 | -2.1 | 4.6 | -53.8 | 5.0 | 5.0 | 4.0 | 4.0 | 65.0 | 65.0 | 131.0 | 131.0 | 13.2 | 13.2 | |
| 8625.1-8750.0 | 8625.1-8750.0 | 440.0 | -2.2 | 4.7 | -55.6 | 3.5 | 3.5 | 2.5 | 2.5 | 65.0 | 65.0 | 130.5 | 130.5 | 13.3 | 13.3 | |
| 8750.1-8875.0 | 8750.1-8875.0 | 441.0 | -2.3 | 4.7 | -57.4 | 2.0 | | | | | | | | | | |

Station Altimeter 4126.09 F. T. S.
30 May. '42
Section No. 515

1950.00000
35400100000
MOLDAVIA
TABLE 14 Cont'd

SLIGHT COORDINATES
32° 00' 00" LAT 16°
106.09965 LONG 116

| GEOMETRIC ALTITUDE IN FEET | PRESSURE IN MILLIBARS | TEMPERATURE IN DEGREES | REFRACTION RATE IN DEGREES CENTIGRADE | REL. HUM. PERCENT | REFL. OF WAVES IN METER | REFL. OF WAVES IN FEET AT 1000' 1000' | REFL. OF WAVES IN FEET AT 1000' 2000' | REFL. OF WAVES IN FEET AT 1000' 3000' | REFL. OF WAVES IN FEET AT 1000' 4000' |
|-------------------------------|--------------------------|---------------------------|--|----------------------|-------------------------------|--|--|--|--|
| 49000.0 | 500.0 | -3.5 | -3.0 | 59.7 | 57.0 | 603.0 | 203.5 | 39.5 | 1.0000129 |
| 46000.0 | 507.2 | -3.4 | -3.0 | 57.0 | 565.5 | 601.7 | 230.3 | 37.4 | 1.0000127 |
| 45000.0 | 570.9 | -3.5 | -3.0 | 54.3 | 556.3 | 600.1 | 227.2 | 34.5 | 1.0000125 |
| 45000.0 | 570.7 | -3.7 | -2.2 | 51.6 | 547.1 | 596.5 | 225.7 | 34.3 | 1.0000123 |
| 46000.0 | 562.0 | -3.0 | -4.3 | 45.9 | 538.1 | 596.9 | 224.6 | 34.8 | 1.0000121 |
| 46000.0 | 554.7 | -3.9 | -6.6 | 51.6** | 529.0 | 595.4 | 224.6 | 37.7 | 1.0000118 |
| 47000.0 | 546.0 | -4.0 | -8.6 | 51.6** | 520.0 | 595.0 | 224.6 | 40.5 | 1.0000116 |
| 47000.0 | 539.2 | -4.2 | -2.0 | 5.3** | 511.2 | 592.2 | 224.1 | 42.0 | 1.0000115 |
| 48000.0 | 531.7 | -4.3 | -1.1 | | 502.3 | 590.8 | 223.9 | 43.1 | 1.0000114 |
| 48500.0 | 524.3 | -4.4 | -2.2 | | 493.3 | 589.5 | 225.2 | 41.9 | 1.0000112 |
| 49000.0 | 517.0 | -4.4 | -9 | | 483.9 | 588.5 | 226.9 | 40.8 | 1.0000110 |
| 49500.0 | 510.9 | -4.5 | -6 | | 474.3 | 587.7 | 229.5 | 39.8 | 1.0000108 |
| 50000.0 | 502.9 | -4.6 | -0 | | 464.5 | 587.1 | 231.2 | 39.7 | 1.0000105 |
| 50500.0 | 290.0 | -4.6 | -4 | | 454.9 | 586.6 | 232.0 | 37.6 | 1.0000101 |
| 51000.0 | 282.8 | -4.6 | -8 | | 445.4 | 586.1 | 234.7 | 36.5 | 1.0000099 |
| 51500.0 | 282.8 | -4.7 | -3 | | 436.1 | 585.5 | 238.2 | 35.5 | 1.0000097 |
| 52000.0 | 276.4 | -4.6 | -5 | | 424.6 | 586.5 | 239.3 | 32.8 | 1.0000095 |
| 52500.0 | 270.1 | -4.6 | -5 | | 415.6 | 586.5 | 240.2 | 30.4 | 1.0000092 |
| 53000.0 | 264.0 | -4.7 | -1 | | 406.8 | 585.8 | 239.4 | 29.5 | 1.0000091 |
| 53500.0 | 256.9 | -4.8 | -1 | | 399.3 | 584.5 | 238.6 | 28.7 | 1.0000089 |
| 54000.0 | 252.1 | -4.9 | -2 | | 391.9 | 583.2 | 240.1 | 29.6 | 1.0000087 |
| 54500.0 | 246.3 | -5.0 | -0 | | 384.6 | 581.9 | 241.5 | 30.6 | 1.0000085 |
| 55000.0 | 240.7 | -5.1 | -0 | | 377.4 | 580.7 | 241.1 | 33.2 | 1.0000084 |
| 55500.0 | 235.1 | -5.1 | -7 | | 369.9 | 579.7 | 240.5 | 36.0 | 1.0000082 |
| 56000.0 | 229.7 | -5.0 | -4 | | 359.3 | 581.4 | 240.3 | 37.5 | 1.0000080 |
| 56500.0 | 224.4 | -5.0 | -5 | | 351.2 | 581.3 | 240.2 | 38.3 | 1.0000078 |
| 57000.0 | 219.0 | -5.0 | -6 | | 345.6 | 581.2 | 241.5 | 39.5 | 1.0000076 |
| 57500.0 | 214.2 | -5.0 | -7 | | 335.4 | 581.1 | 244.4 | 41.2 | 1.0000075 |
| 58000.0 | 209.5 | -5.1 | -3 | | 326.6 | 580.2 | 247.0 | 43.0 | 1.0000073 |
| 58500.0 | 204.4 | -5.2 | -1 | | 322.2 | 579.2 | 248.5 | 45.6 | 1.0000072 |
| 59000.0 | 199.7 | -5.1 | -8 | | 314.5 | 579.6 | 249.0 | 48.1 | 1.0000070 |
| 59500.0 | 195.1 | -5.2 | -1 | | 307.6 | 579.0 | 249.6 | 46.6 | 1.0000069 |
| 60000.0 | 190.3 | -5.2 | -3 | | 301.0 | 578.2 | 249.4 | 44.4 | 1.0000067 |
| 60500.0 | 186.1 | -52.9 | | | 294.4 | 578.1 | 247.3 | 43.2 | 1.0000066 |
| 61000.0 | 181.8 | -53.0 | | | 287.6 | 578.1 | 244.6 | 42.6 | 1.0000064 |
| 61500.0 | 177.6 | -53.0 | | | 281.0 | 578.0 | 242.0 | 43.2 | 1.0000063 |
| 62000.0 | 173.0 | -53.1 | | | 274.5 | 577.9 | 239.4 | 44.0 | 1.0000061 |
| 62500.0 | 169.2 | -52.4 | | | 267.4 | 576.0 | 237.5 | 46.1 | 1.0000060 |
| 63000.0 | 165.5 | -52.5 | | | 261.3 | 578.0 | 238.6 | 48.8 | 1.0000058 |
| 63500.0 | 161.6 | -53.5 | | | 255.0 | 577.7 | 237.7 | 51.1 | 1.0000057 |

** ALMOST OUT, SUM OF RELATIVE INFLUENCY VALUES IN THE INTERPOLATION.

TALEZ, ALTAIR, 41200' F.F.L.
50.40V. 62.0750 HGT. 15.1
ASC. 5.0. 1.0. 2.0

UPPER AIR DATA
3349010313
HOLLUMAN
TABLE 14 Cont'd

STATION COORDINATES
52.00005 LAT 16.
100.09905 LONG 16.0

| GEODETIC PRESSURE | ATMOSPHERE MSL PRESSURE IN MILLIBARS | TEMPERATURE AIR DEWPOINT DEGREES, CENTIGRADE | REL.HUM. PERCENT | INTENSITY CM/CURIE METER | STED OF SOUND KIOTS | REFLECTION DEGREES DEGREES | WIND DATA KNOTS | REFRACTION INDEX |
|-------------------|--|---|---------------------|--------------------------------|---------------------------|----------------------------------|--------------------|---------------------|
| 49000.0 | 15.700 | -64.0 | 250.0 | 576.1 | 238.6 | 53.2 | 1.000056 | |
| 44500.0 | 15.402 | -64.7 | 245.9 | 575.7 | 239.8 | 54.8 | 1.000055 | |
| 45000.0 | 15.003 | -64.8 | 240.2 | 575.7 | 241.4 | 51.6 | 1.000055 | |
| 45500.0 | 14.704 | -65.2 | 234.9 | 575.4 | 245.3 | 46.4 | 1.000052 | |
| 46000.0 | 14.505 | -65.7 | 229.9 | 574.5 | 245.1 | 45.9 | 1.000051 | |
| 46500.0 | 14.011 | -66.3 | 225.0 | 573.7 | 246.9 | 46.2 | 1.000050 | |
| 47000.0 | 13.608 | -66.8 | 210.2 | 573.0 | 248.7 | 42.6 | 1.000049 | |
| 47500.0 | 13.205 | -67.4 | 215.5 | 572.5 | 249.7 | 43.0 | 1.000048 | |
| 48000.0 | 13.003 | -67.9 | 211.0 | 571.6 | 250.6 | 43.4 | 1.000047 | |
| 48500.0 | 12.703 | -68.4 | 206.5 | 570.5 | 251.0 | 44.1 | 1.000046 | |
| 49000.0 | 12.402 | -69.0 | 202.1 | 570.1 | 251.4 | 45.0 | 1.000045 | |
| 49500.0 | 12.103 | -69.5 | 197.0 | 569.4 | 251.6 | 46.1 | 1.000044 | |
| 50000.0 | 11.804 | -60.1 | 193.6 | 568.6 | 252.2 | 47.6 | 1.000043 | |
| 50500.0 | 11.506 | -60.6 | 189.3 | 567.9 | 252.4 | 48.0 | 1.000042 | |
| 51000.0 | 11.206 | -61.1 | 185.3 | 567.3 | 251.7 | 44.4 | 1.000041 | |
| 51500.0 | 11.001 | -61.5 | 181.2 | 566.5 | 251.4 | 41.1 | 1.000040 | |
| 52000.0 | 10.704 | -61.1 | 176.5 | 567.5 | 250.9 | 39.7 | 1.000039 | |
| 52500.0 | 10.408 | -60.9 | 172.0 | 567.0 | 250.6 | 38.6 | 1.000038 | |
| 53000.0 | 10.203 | -61.3 | 168.3 | 567.1 | 257.1 | 37.2 | 1.000037 | |
| 53500.0 | 9.908 | -61.8 | 164.6 | 566.5 | 255.6 | 35.9 | 1.000037 | |
| 54000.0 | 9.704 | -62.6 | 161.1 | 565.5 | 250.0 | 36.5 | 1.000036 | |
| 54500.0 | 9.503 | -63.0 | 157.8 | 564.4 | 244.2 | 37.3 | 1.000035 | |
| 55000.0 | 9.207 | -63.0 | 154.5 | 563.4 | 241.1 | 37.3 | 1.000034 | |
| 55500.0 | 9.006 | -64.3 | 150.9 | 563.0 | 239.0 | 36.3 | 1.000034 | |
| 56000.0 | 8.805 | -64.2 | 147.1 | 562.7 | 238.7 | 35.2 | 1.000033 | |
| 56500.0 | 8.603 | -64.0 | 143.4 | 562.4 | 238.4 | 33.8 | 1.000032 | |
| 57000.0 | 8.402 | -63.9 | 139.8 | 562.0 | 236.2 | 32.4 | 1.000031 | |
| 57500.0 | 8.201 | -63.1 | 135.9 | 561.6 | 240.7 | 32.7 | 1.000030 | |
| 58000.0 | 8.001 | -63.6 | 131.7 | 561.1 | 244.0 | 33.6 | 1.000029 | |
| 58500.0 | 7.801 | -63.0 | 127.6 | 560.6 | 246.0 | 34.4 | 1.000028 | |
| 59000.0 | 7.602 | -60.2 | 124.0 | 560.5 | 247.7 | 34.4 | 1.000028 | |
| 59500.0 | 7.403 | -60.4 | 121.7 | 560.4 | 248.0 | 36.5 | 1.000027 | |
| 60000.0 | 7.204 | -60.7 | 118.9 | 561.7 | 46.9 | 31.5 | 1.000026 | |
| 60500.0 | 7.005 | -60.9 | 116.2 | 567.0 | 40.9 | 27.7 | 1.000025 | |
| 61000.0 | 6.801 | -1.2 | 113.0 | 567.2 | 35.1 | 24.6 | 1.000025 | |
| 61500.0 | 6.604 | -1.5 | 111.0 | 566.7 | 39.6 | 22.5 | 1.000025 | |
| 62000.0 | 6.508 | -1.4 | 109.5 | 566.3 | 35.6 | 20.6 | 1.000024 | |
| 62500.0 | 6.402 | -2.2 | 106.0 | 565.0 | 31.4 | 22.2 | 1.000024 | |
| 63000.0 | 6.207 | -2.5 | 103.0 | 565.4 | 32.0 | 25.5 | 1.000023 | |
| 63500.0 | 6.101 | -2.0 | 101.3 | 564.8 | 34.6 | 28.5 | 1.000023 | |

Official County Seal
SACRAMENTO CALIFORNIA
100-04464-704-116

STATION 4117100 4120+09 FF 1-51
20 NOV. 62 0730 hrs. 51
ACCLIMAT. 100. 315

CHART AIR MAIL
3340010-15
HOLLOWAY
TABLE 14 cont'd

TABLE II. DECOMPOSITION
32.00000 LAT 66
106.00000 LONG 66

| PLATEAU PRESSURE | TEMPERATURE AT WHICH ILLIUMINANT DEGRADATION COMMENCES | PERCENT DEGRADATION (ELIMINATED ILLIUMINANT) | REFL. HUM. OF NYLON PERCENT MELTED |
|---------------------|--|---|---|---|---|---|---|---|---|
| 104.0000.0 | 22.0 | ~1.0 | 35.0 | 37.0 | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 |
| 104.0000.0 | 22.0 | ~1.4 | 35.0 | 38.0 | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 |
| 104.0000.0 | 21.0 | ~5.0 | 34.1 | 38.0 | 37.0 | 37.0 | 37.0 | 37.0 | 37.0 |
| 104.0000.0 | 21.0 | ~5.3 | 35.0 | 38.0 | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 |
| 104.0000.0 | 20.0 | ~9.0 | 32.4 | 38.0 | 32.4 | 32.4 | 32.4 | 32.4 | 32.4 |
| 104.0000.0 | 20.0 | ~9.3 | 31.0 | 38.0 | 31.0 | 31.0 | 31.0 | 31.0 | 31.0 |
| 104.0000.0 | 19.0 | ~8.9 | 30.0 | 38.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
| 104.0000.0 | 19.0 | ~8.9 | 30.1 | 38.0 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 |
| 104.0000.0 | 19.0 | ~8.9 | 29.5 | 38.0 | 29.5 | 29.5 | 29.5 | 29.5 | 29.5 |
| 104.0000.0 | 18.5 | ~8.9 | 28.0 | 38.0 | 28.0 | 28.0 | 28.0 | 28.0 | 28.0 |
| 104.0000.0 | 18.0 | ~9.0 | 28.1 | 38.0 | 28.1 | 28.1 | 28.1 | 28.1 | 28.1 |
| 104.0000.0 | 17.0 | ~9.0 | 27.5 | 38.0 | 27.5 | 27.5 | 27.5 | 27.5 | 27.5 |
| 104.0000.0 | 17.0 | ~9.0 | 26.9 | 38.0 | 26.9 | 26.9 | 26.9 | 26.9 | 26.9 |
| 104.0000.0 | 16.0 | ~9.0 | 26.3 | 38.0 | 26.3 | 26.3 | 26.3 | 26.3 | 26.3 |
| 104.0000.0 | 15.0 | ~9.0 | 25.7 | 38.0 | 25.7 | 25.7 | 25.7 | 25.7 | 25.7 |

24

TAHION ALTITUDE, 01200' F: 1.0
 39.00° E 073° 100° 313
 ASCESSION NO. 313

Mandatory Levels
 3540010513
 MOLMAN
 TABLE 15

at Out Line Coordinates
 32° 00' 00" LAT DEG
 106.00000 LONG

| PRESSURE MILLIBARS | ELEV. FEET | DEGREES CENTIGRADE | TEMPERATURE | | REL.HUM. PERCENT | WIND DATA INTERPOLATED FROM SIGHTS |
|-----------------------|---------------|-----------------------|---------------|-------|---------------------|--|
| | | | AIR DEPTHS | PLANE | | |
| 550.0 | 4704. | 8.0 | 1.0 | 58. | 195.0 | 0.7 |
| 600.0 | 6426. | 6.1 | -1.0 | 57. | 233.7 | 13.8 |
| 750.0 | 8147. | 1.2 | -3.1 | 73. | 240.2 | 20.0 |
| 700.0 | 9958. | -2.2 | -7.9 | 65. | 251.5 | 18.6 |
| 150.0 | 11876. | -76.3 | -11.6 | 66. | 263.7 | 25.6 |
| 600.0 | 13915. | -10.7 | -15.6 | 67. | 265.4 | 34.0 |
| 550.0 | 16092. | -15.5 | -16.5 | 92. | 260.0 | 31.1 |
| 400.0 | 18433. | -20.3 | -22.2 | 85. | 252.1 | 30.0 |
| 650.0 | 20962. | -26.7 | -27.0 | 97. | 246.0 | 32.0 |
| 400.0 | 23719. | -32.0 | -37.7 | 61. | 235.3 | 40.1 |
| 550.0 | 26755. | -40.3 | -53.0 | 24.** | 224.0 | 39.4 |
| 300.0 | 30152. | -46.2 | | | 231.5 | 38.3 |
| 250.0 | 34111. | -49.4 | | | 240.0 | 29.9 |
| 200.0 | 38376. | -51.8 | | | 249.7 | 47.8 |
| 175.0 | 41705. | -53.1 | | | 240.3 | 43.6 |
| 150.0 | 44959. | -54.7 | | | 241.0 | 51.2 |
| 125.0 | 48750. | -58.0 | | | 251.2 | 44.7 |
| 100.0 | 53307. | -61.8 | | | 255.0 | 30.1 |
| 80.0 | 57803. | -61.6 | | | 245.0 | 35.5 |
| 70.0 | 60531. | -61.0 | | | 238.4 | 26.3 |
| 60.0 | 63658. | -62.8 | | | 244.7 | 29.4 |
| 50.0 | 67379. | -58.5 | | | 287.4 | 14.3 |
| 40.0 | 71955. | -58.6 | | | 240.3 | 11.7 |
| 30.0 | 77675. | -60.1 | | | 342.9 | 4.6 |
| 25.0 | 81687. | -54.0 | | | 241.1 | 23.3 |
| 20.0 | 86491. | -48.9 | | | 298.8 | 10.5 |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION NUMBER 405117 FEET MSL
30 NOV. 62 0730 HRS, 1951
ASCENTION 1.0. 116

SIGNIFICANT LEVEL DATA

STATION COORDINATES,
52°40'17", LAT LON
106°31'23", LON DEG

LC-37

TABLE 16

DEGREES CELSIUS
TEMPERATURE
AIR DEWPOINT
DEGREES CELSIUS
PRESSURE

| DEPTHS, MSL FEET | DEPTH, FEET | TEMPERATURE DEGREES CELSIUS | AIR DEWPOINT DEGREES CELSIUS | PRESSURE |
|------------------|-------------|--------------------------------|---------------------------------|----------|
| 872.9 | 4051.4 | 4.7 | 2.9 | 08.0 |
| 869.8 | 4429.0 | 9.6 | 3.6 | 06.0 |
| 850.0 | 4773.2 | 9.1 | 0.8 | 50.0 |
| 837.1 | 5189.8 | 9.4 | 0.6 | 55.0 |
| 819.1 | 5814.2 | 8.1 | 0.1 | 57.0 |
| 786.5 | 6074.9 | 3.9 | -2.9 | 61.0 |
| 748.7 | 6181.4 | -1.1 | -4.2 | 74.0 |
| 723.7 | 9074.5 | -5.0 | -5.0 | 75.0 |
| 712.6 | 9479.7 | -1.9 | -6.4 | 71.0 |
| 700.0 | 9946.2 | -2.0 | -7.5 | 66.0 |
| 691.6 | 10185.8 | -3.1 | -10.0 | 59.0 |
| 655.6 | 11644.8 | -5.9 | -12.0 | 62.0 |
| 651.1 | 11822.2 | -6.0 | -14.0 | 53.0 |
| 642.2 | 12176.0 | -6.9 | -12.7 | 65.0 |
| 616.0 | 13241.7 | -8.5 | -15.7 | 56.0 |
| 607.1 | 13612.2 | -9.4 | -15.7 | 60.0 |
| 580.3 | 14753.0 | -12.7 | -13.1 | 97.0 |
| 563.6 | 15184.4 | -14.0 | -14.9 | 93.0 |
| 557.9 | 15778.5 | -14.4 | -17.6 | 75.0 |
| 543.6 | 16186.1 | -14.2 | -19.5 | 64.0 |
| 529.0 | 17062.8 | -16.3 | -21.3 | 65.0 |
| 521.8 | 17401.1 | -17.7 | -21.6 | 70.0 |
| 513.8 | 17780.9 | -18.5 | -23.1 | 67.0 |
| 500.0 | 18448.1 | -19.3 | -22.9 | 73.0 |
| 489.2 | 18979.6 | -21.9 | -23.9 | 84.0 |
| 473.3 | 19777.5 | -23.4 | -24.9 | 87.0 |
| 461.2 | 20401.2 | -23.1 | -30.0 | 53.0 |
| 435.6 | 21767.0 | -26.9 | -32.6 | 58.0 |
| 416.4 | 22832.1 | -29.1 | -36.4 | 49.0 |
| 400.0 | 23772.0 | -31.8 | -39.1 | 46.0 |
| 387.6 | 24490.0 | -33.5 | -41.3 | 45.0 |
| 353.6 | 26633.9 | -39.7 | -46.8 | 46.0 |
| 333.1 | 27931.7 | -42.6 | -42.6 | |
| 300.0 | 30233.4 | -47.0 | -47.0 | |
| 275.9 | 32052.1 | -48.4 | -48.4 | |
| 267.2 | 32748.9 | -46.0 | -46.0 | |
| 250.0 | 34200.6 | -47.0 | -47.0 | |
| 241.9 | 35010.1 | -46.7 | -46.7 | |
| 235.3 | 35522.6 | -47.9 | -47.9 | |
| 219.4 | 37045.1 | -47.3 | -47.3 | |

STATION ALTITUDE 4061.7 FEET MSL
30 NOV. 82 0730 HR. MDT
ASCENSION NO. 116

SIGNIFICANT LEVEL DATA
33°01'00" N
106°31'32" E
TABLE 16 Cont'd

GEODETIC COORDINATES
32°40'17" LAT DEG
106°31'32" LONG DEG

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE MSL FEET | TEMPERATURE DEGREES DEGREES | REL. HUM. DEWPOINT CENTIGRADE PERCENT |
|-----------------------|-----------------------------------|-----------------------------------|--|
| 200.0 | 39057.0 | -48.6 | |
| 197.3 | 39005.3 | -49.9 | |
| 177.4 | 41635.1 | -52.0 | |
| 167.6 | 42841.1 | -54.6 | |
| 158.2 | 44063.2 | -53.1 | |
| 155.0 | 45190.0 | -54.7 | |
| 144.6 | 45263.7 | -54.6 | |
| 127.2 | 48652.0 | -57.5 | |
| 110.4 | 51616.9 | -55.5 | |
| 100.0 | 53672.4 | -60.8 | |
| 84.0 | 57238.5 | -62.3 | |
| 77.2 | 58970.9 | -59.5 | |
| 70.0 | 60994.5 | -59.3 | |
| 55.0 | 64735.3 | -60.1 | |
| 50.0 | 67935.8 | -60.2 | |
| 45.2 | 70022.3 | -58.9 | |
| 34.7 | 75503.5 | -59.1 | |
| 31.5 | 76239.5 | -55.3 | |
| 30.0 | 78559.5 | -56.9 | |
| 26.5 | 81146.5 | -58.9 | |
| 23.0 | 84129.5 | -52.6 | |
| 20.0 | 87110.2 | -53.5 | |
| 19.1 | 88093.0 | -52.5 | |

STATION ALTITUDE 4051.37 FEET MSL
30 NOV. 82 0730 HRS, PST
ASCENSION NO. 116

OPERATOR AIR DATA
3340100110
LC-37
TABLE 17

GEOLITIC COORDINATES
52.40175 LAT L6
106.31232 LONG L6

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMP. NATURE AIR DEWPONT DEGREES, CENTIGRADE | REL. HUM. PERCENT | DEVIAT. GM/CUBIC METER | SPEED OF SOUND KILOTS | WIND DATA DIRECTION DEGREES (TRUE) WINDSPEED KILOTS | WIND DATA DIRECTION DEGREES (TRUE) WINDSPEED KILOTS | INPUT X OF REFRACTION: |
|--------------------------------|-----------------------|---|----------------------|---------------------------|-----------------------------|---|---|------------------------------|
| 4051.4 | 872.9 | 4.7 | 2.9 | 88.0 | 1090.9 | 650.4 | 150.9 | 2.9 |
| 4500.6 | 858.6 | 9.5 | 3.0 | 83.9 | 1054.6 | 656.1 | 161.0 | 2.4 |
| 5000.0 | 843.0 | 9.3 | 0.8 | 55.5 | 1036.8 | 655.0 | 17.7 | 2.8 |
| 5500.0 | 827.6 | 8.8 | 0.5 | 56.0 | 1019.8 | 655.0 | 38.7 | 4.0 |
| 6000.0 | 812.5 | 7.4 | -0.4 | 57.7 | 1006.2 | 655.4 | 49.4 | 5.4 |
| 6500.0 | 797.5 | 5.4 | -1.8 | 59.6 | 994.9 | 651.0 | 52.2 | 9.8 |
| 7000.0 | 782.8 | 3.5 | -1.0 | 62.2 | 983.3 | 648.8 | 53.1 | 14.5 |
| 7500.0 | 768.2 | 2.0 | -3.4 | 67.2 | 970.4 | 647.0 | 54.3 | 16.6 |
| 8000.0 | 753.8 | 0.5 | -4.0 | 72.2 | 957.6 | 645.1 | 55.5 | 18.5 |
| 8500.0 | 739.7 | -0.3 | -4.5 | 73.6 | 942.5 | 644.2 | 57.1 | 18.9 |
| 9000.0 | 725.8 | -0.7 | -4.9 | 73.1 | 926.1 | 643.7 | 58.7 | 19.3 |
| 9500.0 | 712.0 | -1.9 | -6.5 | 70.8 | 912.7 | 642.3 | 58.8 | 21.3 |
| 10000.0 | 699.6 | -2.2 | -8.0 | 64.4 | 896.7 | 641.0 | 58.6 | 23.6 |
| 10500.0 | 685.2 | -3.7 | -10.4 | 59.6 | 884.6 | 640.0 | 59.9 | 26.1 |
| 11000.0 | 672.1 | -4.7 | -11.1 | 60.7 | 870.8 | 638.8 | 60.3 | 26.6 |
| 11500.0 | 659.3 | -5.6 | -11.8 | 61.8 | 857.3 | 637.7 | 64.1 | 31.0 |
| 12000.0 | 646.6 | -6.5 | -13.3 | 58.0 | 843.5 | 636.5 | 64.7 | 35.0 |
| 12500.0 | 634.1 | -7.4 | -13.6 | 60.9 | 830.2 | 635.5 | 65.2 | 39.1 |
| 13000.0 | 621.8 | -8.1 | -15.0 | 57.6 | 816.5 | 634.6 | 64.1 | 39.7 |
| 13500.0 | 609.8 | -9.1 | -15.7 | 58.8 | 803.7 | 633.4 | 62.2 | 36.8 |
| 14000.0 | 597.9 | -10.5 | -14.5 | 72.6 | 792.0 | 631.7 | 60.5 | 39.7 |
| 14500.0 | 586.1 | -12.0 | -13.4 | 88.8 | 780.7 | 630.0 | 60.1 | 39.0 |
| 15000.0 | 574.6 | -13.1 | -13.7 | 95.6 | 768.8 | 628.6 | 59.7 | 34.2 |
| 15500.0 | 563.2 | -14.0 | -15.0 | 92.0 | 756.2 | 627.1 | 60.9 | 34.0 |
| 16000.0 | 552.1 | -14.3 | -16.4 | 71.0 | 742.3 | 627.1 | 62.3 | 34.0 |
| 16500.0 | 541.1 | -14.6 | -19.8 | 64.2 | 728.3 | 626.8 | 62.3 | 35.4 |
| 17000.0 | 530.3 | -16.1 | -21.1 | 64.9 | 718.2 | 624.8 | 62.0 | 32.6 |
| 17500.0 | 519.7 | -17.9 | -22.1 | 69.2 | 708.8 | 622.6 | 60.0 | 32.9 |
| 18000.0 | 509.2 | -18.8 | -23.0 | 69.0 | 690.9 | 621.6 | 57.3 | 33.5 |
| 18500.0 | 499.8 | -19.6 | -23.0 | 74.1 | 684.9 | 620.6 | 55.4 | 34.5 |
| 19000.0 | 488.8 | -21.9 | -23.9 | 84.1 | 677.4 | 617.7 | 53.8 | 35.7 |
| 19500.0 | 478.8 | -22.9 | -24.6 | 86.0 | 666.0 | 616.5 | 51.9 | 36.6 |
| 20000.0 | 468.9 | -23.3 | -26.5 | 74.9 | 653.5 | 616.0 | 49.1 | 37.1 |
| 20500.0 | 459.3 | -23.4 | -30.2 | 53.4 | 640.3 | 615.8 | 46.4 | 37.6 |
| 21000.0 | 449.8 | -24.8 | -31.1 | 55.2 | 630.6 | 614.8 | 44.1 | 37.9 |
| 21500.0 | 440.5 | -26.2 | -32.1 | 57.0 | 621.1 | 612.4 | 41.6 | 38.3 |
| 22000.0 | 431.5 | -27.4 | -33.4 | 56.0 | 611.2 | 610.8 | 40.1 | 38.6 |
| 22500.0 | 422.5 | -28.4 | -35.2 | 51.8 | 600.9 | 609.5 | 39.1 | 38.8 |
| 23000.0 | 413.4 | -29.6 | -36.9 | 48.8 | 591.2 | 608.1 | 38.0 | 37.0 |
| 23500.0 | 404.7 | -31.0 | -38.3 | 48.3 | 582.1 | 606.3 | 36.5 | 39.1 |

STATION ALTITUDE 4051.77 FT. 15L
30 NOV. 82 0730 HRS 15L
ASLUSIUN 40. 116

UPPER AIR DATA
3540150116
LC-37
TABLE 17 Cont'd

GEODETIC COORDINATES
32.40175 LAT 165
106.31232 LONG 165

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | REL.HUM. PERCENT | SPEED OF SOUND KNOTS | WIND DATA SPLLE KIOTS | INDEX OF REFRACTION |
|--------------------------------|-----------------------|--|---------------------|----------------------------|-----------------------------|---------------------------|
| 24000.0 | 396.1 | -32.3 | -39.8 | 47.0 | 572.9 604.6 | 234.8 39.2 |
| 24500.0 | 397.6 | -33.5 | -41.3 | 45.0 | 563.5 603.1 | 33.0 39.3 |
| 25000.0 | 379.2 | -35.0 | -42.6 | 45.2 | 554.6 601.3 | 232.1 36.2 |
| 25500.0 | 371.0 | -36.4 | -43.9 | 45.5 | 549.9 599.4 | 231.2 37.1 |
| 26000.0 | 363.0 | -37.9 | -45.2 | 45.7 | 537.3 597.6 | 229.7 36.4 |
| 26500.0 | 355.1 | -39.5 | -46.5 | 45.9 | 528.9 595.6 | 227.4 36.3 |
| 27000.0 | 347.3 | -40.5 | -50.5 | 33.0** | 520.0 594.2 | 225.0 36.2 |
| 27500.0 | 339.6 | -41.6 | -57.7 | 15.3** | 511.0 592.8 | 225.0 38.3 |
| 28000.0 | 332.1 | -42.7 | | | 502.1 591.5 | 225.4 40.8 |
| 28500.0 | 324.6 | -43.8 | | | 493.1 590.0 | 226.8 42.3 |
| 29000.0 | 317.3 | -44.9 | | | 484.2 588.6 | 229.7 42.7 |
| 29500.0 | 310.2 | -45.9 | | | 475.6 587.2 | 232.6 43.2 |
| 30000.0 | 303.2 | -47.0 | | | 467.1 585.9 | 234.8 43.3 |
| 30500.0 | 296.3 | -47.6 | | | 457.8 585.0 | 236.7 43.2 |
| 31000.0 | 289.6 | -47.9 | | | 447.8 584.7 | 238.6 43.1 |
| 31500.0 | 283.0 | -48.1 | | | 438.1 584.4 | 239.3 44.3 |
| 32000.0 | 276.6 | -48.4 | | | 428.6 584.1 | 239.7 45.8 |
| 32500.0 | 270.3 | -47.4 | | | 417.1 585.3 | 239.9 46.8 |
| 33000.0 | 264.1 | -46.9 | | | 406.7 586.0 | 239.7 46.9 |
| 33500.0 | 258.2 | -47.0 | | | 397.6 585.9 | 239.4 47.1 |
| 34000.0 | 252.3 | -47.0 | | | 389.6 585.9 | 239.9 47.3 |
| 34500.0 | 246.6 | -46.9 | | | 379.7 586.0 | 240.9 47.8 |
| 35000.0 | 241.0 | -46.7 | | | 370.8 586.2 | 242.0 48.2 |
| 35500.0 | 235.5 | -47.8 | | | 364.2 584.0 | 243.4 48.8 |
| 36000.0 | 230.2 | -47.7 | | | 355.7 584.9 | 245.0 49.5 |
| 36500.0 | 225.0 | -47.5 | | | 347.3 585.2 | 246.4 49.9 |
| 37000.0 | 219.9 | -47.3 | | | 339.1 585.4 | 247.2 47.9 |
| 37500.0 | 214.9 | -47.6 | | | 331.8 585.1 | 248.6 46.0 |
| 38000.0 | 210.0 | -47.9 | | | 324.8 584.7 | 250.5 43.6 |
| 38500.0 | 205.0 | -48.0 | | | 317.8 584.5 | 254.2 41.0 |
| 39000.0 | 200.5 | -48.6 | | | 311.0 583.8 | 258.4 38.5 |
| 39500.0 | 195.9 | -49.3 | | | 304.9 582.9 | 260.7 37.3 |
| 40000.0 | 191.5 | -50.0 | | | 298.9 581.9 | 263.1 36.2 |
| 40500.0 | 187.0 | -50.6 | | | 292.8 581.1 | 262.1 35.9 |
| 41000.0 | 182.7 | -51.2 | | | 286.8 580.4 | 255.5 37.1 |
| 41500.0 | 178.5 | -51.8 | | | 281.0 579.6 | 249.3 38.8 |
| 42000.0 | 174.4 | -52.8 | | | 275.7 576.3 | 245.6 41.7 |
| 42500.0 | 170.3 | -53.9 | | | 270.6 576.9 | 238.7 44.9 |
| 43000.0 | 166.3 | -54.4 | | | 264.9 576.2 | 238.0 46.0 |
| 43500.0 | 162.5 | -53.8 | | | 258.0 577.0 | 239.2 46.8 |

** AT LEAST ONE OBSERVATION RELATIVE HUMIDITY VALUE WAS USED. IN THE INTERPOLATION.

STATION ALTITUDE 4051.17 FEET MSL
30 NOV. 82 0730 HRS TST
ASCENDIC. NO. 116

WEATHER AIR DATA
3340160116
LC-37

TABLE 17 Cont'd

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES WIND SPEED KNOTS | INDEX OF REFRACTION | WIND DATA DIRECTION DEGREES WIND SPEED KNOTS | |
|--------------------------------|-----------------------|---------------------------------------|-------------------|------------------------|----------------------|---|---------------------------|---|---------------------------|
| | | | | | | | | WIND DATA DIRECTION DEGREES | INDEX OF REFRACTION |
| 44000.0 | 156.7 | -53.2 | 251.3 | 577.8 | 240.4 | 50.4 | 1.0000056 | | |
| 44500.0 | 155.0 | -53.0 | 246.0 | 577.1 | 241.5 | 54.5 | 1.0000055 | | |
| 45000.0 | 151.4 | -54.4 | 241.1 | 576.2 | 242.7 | 57.6 | 1.0000054 | | |
| 45500.0 | 147.8 | -54.7 | 235.7 | 575.9 | 244.0 | 60.0 | 1.0000052 | | |
| 46000.0 | 144.3 | -54.6 | 230.1 | 575.9 | 245.2 | 62.1 | 1.0000051 | | |
| 46500.0 | 140.9 | -55.2 | 225.3 | 575.2 | 246.4 | 60.4 | 1.0000050 | | |
| 47000.0 | 137.6 | -55.7 | 220.5 | 574.5 | 247.7 | 58.8 | 1.0000049 | | |
| 47500.0 | 134.4 | -56.3 | 215.8 | 573.7 | 248.6 | 58.7 | 1.0000048 | | |
| 48000.0 | 131.2 | -56.8 | 211.3 | 573.0 | 249.5 | 59.5 | 1.0000047 | | |
| 48500.0 | 128.1 | -57.3 | 206.8 | 572.3 | 249.2 | 59.8 | 1.0000046 | | |
| 49000.0 | 125.1 | -57.3 | 201.9 | 572.4 | 248.7 | 59.7 | 1.0000045 | | |
| 49500.0 | 122.1 | -56.9 | 196.8 | 572.9 | 247.2 | 57.9 | 1.0000044 | | |
| 50000.0 | 119.3 | -56.6 | 191.9 | 573.3 | 245.2 | 55.5 | 1.0000043 | | |
| 50500.0 | 116.5 | -56.3 | 187.0 | 573.7 | 246.7 | 53.9 | 1.0000042 | | |
| 51000.0 | 113.7 | -55.9 | 182.3 | 574.2 | 249.0 | 52.5 | 1.0000041 | | |
| 51500.0 | 111.0 | -55.6 | 177.8 | 574.6 | 252.7 | 52.0 | 1.0000040 | | |
| 52000.0 | 108.4 | -56.5 | 174.3 | 573.4 | 256.8 | 51.9 | 1.0000039 | | |
| 52500.0 | 105.8 | -57.8 | 171.1 | 571.7 | 258.8 | 50.8 | 1.0000038 | | |
| 53000.0 | 103.3 | -59.1 | 166.1 | 570.0 | 256.9 | 48.5 | 1.0000037 | | |
| 53500.0 | 100.8 | -60.4 | 165.1 | 568.3 | 258.1 | 46.2 | 1.0000037 | | |
| 54000.0 | 98.4 | -60.9 | 161.6 | 567.5 | 253.1 | 43.9 | 1.0000036 | | |
| 54500.0 | 96.0 | -61.1 | 157.8 | 567.2 | 247.0 | 42.0 | 1.0000035 | | |
| 55000.0 | 93.7 | -61.4 | 154.1 | 567.0 | 243.5 | 42.9 | 1.0000034 | | |
| 55500.0 | 91.5 | -61.6 | 150.6 | 566.7 | 239.5 | 44.4 | 1.0000034 | | |
| 56000.0 | 89.2 | -61.8 | 147.1 | 566.4 | 237.4 | 45.1 | 1.0000033 | | |
| 56500.0 | 87.1 | -62.0 | 143.7 | 566.1 | 237.2 | 44.8 | 1.0000032 | | |
| 57000.0 | 85.0 | -62.2 | 140.3 | 565.8 | 236.9 | 44.4 | 1.0000031 | | |
| 57500.0 | 82.9 | -61.9 | 136.8 | 566.3 | 237.6 | 41.0 | 1.0000030 | | |
| 58000.0 | 80.9 | -61.1 | 133.0 | 567.3 | 238.5 | 37.4 | 1.0000030 | | |
| 58500.0 | 79.0 | -60.3 | 129.3 | 568.4 | 241.3 | 35.0 | 1.0000029 | | |
| 59000.0 | 77.1 | -59.5 | 125.7 | 569.4 | 246.5 | 34.1 | 1.0000028 | | |
| 59500.0 | 75.2 | -59.4 | 122.7 | 569.5 | 251.9 | 33.5 | 1.0000027 | | |
| 60000.0 | 73.5 | -59.4 | 119.7 | 569.6 | 254.5 | 33.4 | 1.0000027 | | |
| 60500.0 | 71.7 | -59.3 | 116.8 | 569.6 | 256.7 | 33.3 | 1.0000026 | | |
| 61000.0 | 70.0 | -59.3 | 114.0 | 569.7 | 254.9 | 32.1 | 1.0000025 | | |
| 61500.0 | 68.3 | -59.4 | 111.3 | 569.6 | 249.1 | 30.2 | 1.0000025 | | |
| 62000.0 | 66.7 | -59.5 | 108.7 | 569.4 | 242.6 | 28.8 | 1.0000024 | | |
| 62500.0 | 65.1 | -59.6 | 106.2 | 569.3 | 237.2 | 28.8 | 1.0000024 | | |
| 63000.0 | 63.6 | -59.7 | 103.7 | 569.1 | 231.6 | 29.1 | 1.0000023 | | |
| 63500.0 | 62.0 | -59.8 | 101.3 | 569.0 | 231.1 | 29.8 | 1.0000023 | | |

STATION ALTITUDE 4051.77 FT. 115,
30 NOV. 82 0750 HRS, MST
ASCENSUS NO. 116

UPPER AIR DATA
35000 FT
LC-37
TABLE 17 Cont'd

OFFICE COORDINATES
32°40'17.5" LAT LEG
106°31'24.5" LONG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE DEGREES CENTIGRADE | AIR DEPOINT PERCENT | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPED. OF SOUND KNOTS | WIND DATA WIRLUTION DEGREES(10) | SPED KNOTS | WIND DATA REFRACTION | REFRACTION |
|--------------------------------|-----------------------|-----------------------------------|------------------------|----------------------|------------------------------|----------------------------|---------------------------------------|---------------|-------------------------|------------|
| 64000.0 | 60.5 | -59.9 | 98.9 | 96.8 | 232.6 | 30.6 | 1.000022 | | | |
| 64500.0 | 59.1 | -60.0 | 98.6 | 96.7 | 235.2 | 30.5 | 1.000022 | | | |
| 65000.0 | 57.7 | -60.1 | 94.3 | 96.8 | 244.9 | 26.5 | 1.000021 | | | |
| 65500.0 | 56.3 | -60.1 | 92.0 | 96.6 | 257.5 | 23.5 | 1.000020 | | | |
| 66000.0 | 54.9 | -60.1 | 89.8 | 96.8 | 266.7 | 20.9 | 1.000020 | | | |
| 66500.0 | 53.6 | -60.2 | 87.7 | 96.8 | 272.9 | 17.8 | 1.000020 | | | |
| 67000.0 | 52.3 | -60.2 | 85.6 | 96.8 | 261.3 | 15.1 | 1.000019 | | | |
| 67500.0 | 51.1 | -60.2 | 83.5 | 96.8 | 273.3 | 13.6 | 1.000019 | | | |
| 68000.0 | 49.8 | -60.2 | 81.5 | 96.8 | 262.7 | 12.5 | 1.000018 | | | |
| 68500.0 | 48.7 | -59.8 | 79.5 | 96.9 | 258.3 | 12.2 | 1.000018 | | | |
| 69000.0 | 47.5 | -59.5 | 77.4 | 96.9 | 267.6 | 12.6 | 1.000017 | | | |
| 69500.0 | 46.4 | -59.2 | 75.5 | 96.9 | 270.1 | 13.3 | 1.000017 | | | |
| 70000.0 | 45.2 | -58.9 | 73.6 | 97.0 | 274.6 | 14.1 | 1.000016 | | | |
| 70500.0 | 44.2 | -58.9 | 71.8 | 97.0 | 270.2 | 15.0 | 1.000016 | | | |
| 71000.0 | 43.1 | -58.9 | 70.1 | 97.0 | 266.4 | 16.0 | 1.000016 | | | |
| 71500.0 | 42.1 | -59.0 | 68.5 | 97.0 | 262.1 | 15.7 | 1.000015 | | | |
| 72000.0 | 41.1 | -59.0 | 66.8 | 97.0 | 257.8 | 15.5 | 1.000015 | | | |
| 72500.0 | 40.1 | -59.0 | 65.2 | 97.0 | 253.7 | 15.6 | 1.000015 | | | |
| 73000.0 | 39.2 | -59.0 | 63.7 | 97.0 | 253.0 | 17.5 | 1.000014 | | | |
| 73500.0 | 38.2 | -59.0 | 62.2 | 97.0 | 252.4 | 19.4 | 1.000014 | | | |
| 74000.0 | 37.3 | -59.0 | 60.7 | 97.0 | 251.1 | 21.2 | 1.000014 | | | |
| 74500.0 | 36.4 | -59.1 | 59.3 | 97.0 | 247.7 | 22.9 | 1.000013 | | | |
| 75000.0 | 35.6 | -59.1 | 57.9 | 97.0 | 244.7 | 24.7 | 1.000013 | | | |
| 75500.0 | 34.7 | -59.1 | 56.5 | 97.0 | 244.8 | 25.1 | 1.000013 | | | |
| 76000.0 | 33.9 | -56.5 | 54.5 | 97.3 | 249.3 | 23.7 | 1.000012 | | | |
| 76500.0 | 33.1 | -55.5 | 53.0 | 97.4 | 254.4 | 22.4 | 1.000012 | | | |
| 77000.0 | 32.3 | -55.8 | 51.8 | 97.4 | 261.7 | 20.1 | 1.000012 | | | |
| 77500.0 | 31.6 | -56.2 | 50.7 | 97.5 | 273.1 | 17.4 | 1.000011 | | | |
| 78000.0 | 30.8 | -56.5 | 49.5 | 97.5 | 288.0 | 15.5 | 1.000011 | | | |
| 78500.0 | 30.1 | -56.9 | 48.5 | 97.2 | 295.5 | 13.8 | 1.000011 | | | |
| 79000.0 | 29.4 | -57.2 | 47.4 | 97.2 | 297.7 | 11.8 | 1.000011 | | | |
| 79500.0 | 28.7 | -57.6 | 46.4 | 97.1 | 300.8 | 9.7 | 1.000010 | | | |
| 80000.0 | 28.0 | -58.0 | 45.3 | 97.1 | 296.8 | 8.0 | 1.000010 | | | |
| 80500.0 | 27.3 | -58.4 | 44.3 | 97.0 | 286.4 | 6.7 | 1.000010 | | | |
| 81000.0 | 26.7 | -58.8 | 43.4 | 97.0 | 271.6 | 5.7 | 1.000010 | | | |
| 81500.0 | 26.1 | -58.2 | 42.2 | 97.1 | 256.5 | 5.8 | 1.000009 | | | |
| 82000.0 | 25.4 | -57.2 | 41.0 | 97.2 | 244.3 | 6.5 | 1.000009 | | | |
| 82500.0 | 24.9 | -56.1 | 39.9 | 97.3 | 234.6 | 7.4 | 1.000009 | | | |
| 83000.0 | 24.3 | -55.1 | 38.8 | 97.3 | 230.6 | 6.7 | 1.000009 | | | |
| 83500.0 | 23.7 | -44.1 | 37.7 | 97.6 | 243.7 | 10.1 | 1.000008 | | | |

STATION ALTITUDE 4051.37 FEET
30 MILE. 82 0730 HRS. MDT
ASCENSION NO. 116

UPPER AIR DATA
3340160116
LC-37
TABLE 17 Cont'd

GEODETIC COORDINATES
32°40'17.5" LAT DEG
106°31'23.2" LON DEG

| GEOMETRIC ALTITUDE MILE | PRESSURE INSL FEET | TEMPERATURE AIR MILLIBARS | DEWPOINT DEGREES | REL. HUM. PERCENT | SPEED OF SOUND KNOTS METER | WIND DATA WIND DIRECTION (DEGREES) | WIND SPEED KNOTS | INDEX OF REFRACTION |
|----------------------------|-----------------------|---------------------------------|---------------------|----------------------|-------------------------------------|--|---------------------|---------------------------|
| 84000.0 | 25.1 | -53.1 | | | 36.6 | 578.0 | 247.4 | 11.6 |
| 84500.0 | 24.6 | -52.9 | | | 35.7 | 578.2 | 250.3 | 12.4 |
| 85000.0 | 22.1 | -53.0 | | | 34.9 | 578.0 | 252.9 | 13.1 |
| 85500.0 | 21.6 | -53.1 | | | 34.1 | 577.9 | 255.2 | 13.9 |
| 86000.0 | 21.1 | -53.2 | | | 33.4 | 577.7 | | |
| 86500.0 | 20.6 | -53.4 | | | 32.6 | 577.6 | | |
| 87000.0 | 20.1 | -53.5 | | | 31.9 | 577.4 | | |
| 87500.0 | 19.6 | -53.1 | | | 31.1 | 577.9 | | |
| 88000.0 | 19.2 | -52.6 | | | 30.3 | 578.6 | | |

STATION ALTIMETER 4051.37 FEET MSL
30 NOV. 62 0730 hrs. 1951
ASCENDANC NO. 116

MANUFACTURER LEVELS
33401800110
LC-37

TABLE 1C

GLOBAL COORDINATES
52.40175 LAT DEG
106.31232 LONG DEG

PRESURE GRADIENT
MILLIBARS
FLEET
DEGREES
CENTIGRAD

TEMPERATURE
AIR
DEGREES
CENTIGRAD

REL. HUM.
PERCENT
DEGREES (IN)
DEGREES (IN)

WIND DATA
DIRECTION
DEGREES
SPEED
KNOTS

| | | | | | |
|-------|--------|-------|-------|-------|------|
| 450.0 | 4770. | 9.1 | 56. | 202.4 | 2.5 |
| 400.0 | 6413. | 5.7 | 59. | 252.0 | 9.0 |
| 750.0 | 8128. | 0 | 74. | 255.9 | 10.6 |
| 700.0 | 9917. | -2.0 | 66. | 258.6 | 23.4 |
| 650.0 | 11853. | -6.1 | 54. | 264.5 | 32.5 |
| 600.0 | 13895. | -10.3 | 70. | 260.7 | 35.8 |
| 550.0 | 16074. | -14.3 | 69. | 262.5 | 34.0 |
| 500.0 | 18423. | -19.3 | 75. | 265.6 | 34.4 |
| 450.0 | 20960. | -24.7 | 51. | 244.2 | 37.9 |
| 400.0 | 23733. | -31.8 | 48. | 235.6 | 39.1 |
| 350.0 | 26778. | -40.1 | 39.** | 225.9 | 36.2 |
| 300.0 | 30175. | -47.5 | 235.6 | 45.3 | |
| 250.0 | 34128. | -47.0 | 240.3 | 47.5 | |
| 200.0 | 38965. | -48.6 | 258.6 | 38.4 | |
| 175.0 | 41821. | -52.6 | 244.6 | 41.1 | |
| 150.0 | 45070. | -54.7 | 243.2 | 58.4 | |
| 125.0 | 48876. | -57.3 | 246.7 | 59.7 | |
| 100.0 | 53508. | -60.8 | 256.7 | 45.5 | |
| 80.0 | 58046. | -60.7 | 238.9 | 36.0 | |
| 70.0 | 60786. | -59.3 | 255.3 | 32.3 | |
| 60.0 | 65949. | -60.0 | 233.1 | 30.8 | |
| 50.0 | 67681. | -60.2 | 264.9 | 12.7 | |
| 40.0 | 72269. | -59.0 | 253.6 | 15.7 | |
| 30.0 | 78226. | -56.9 | 295.5 | 15.7 | |
| 25.0 | 81998. | -56.4 | 238.0 | 7.0 | |
| 20.0 | 86704. | -53.5 | | | |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

SATION ALTITUDE 3400.0 FEET MSL
30 DEG. 42' LAT 106.37033 LONG 106.37033

SIGNIFICANT LEVEL DATA
33400.0000
WHITE LAUD
TABLE 10

STATION COORDINATES
32°40'45" LAT 106°37'03" LONG

| PRESSURE GEOMETRIC IN MILLIBARS | ALTITUDE MSL FEET | TEMPERATURE DEGREES CENTIGRADE | HUMIDITY PERCENT |
|------------------------------------|----------------------|-----------------------------------|---------------------|
| 674.9 | 5789.0 | 8.7 | 75.0 |
| 665.5 | 4290.1 | 10.5 | 61.0 |
| 656.0 | 4777.8 | 9.9 | 48.0 |
| 601.8 | 6157.8 | 5.1 | 59.0 |
| 751.3 | 8087.1 | -2.2 | 61.0 |
| 706.0 | 9939.0 | -3.1 | 76.0 |
| 653.8 | 11707.2 | -5.8 | 54.0 |
| 645.3 | 12044.1 | -6.2 | 57.0 |
| 626.7 | 12794.8 | -7.4 | 50.0 |
| 500.3 | 18428.5 | -21.3 | 97.0 |
| 450.2 | 20526.4 | -26.4 | 86.0 |
| 450.8 | 20013.3 | -26.7 | 51.0 |
| 442.8 | 21358.2 | -27.1 | 37.0 |
| 431.3 | 21260.4 | -28.5 | 37.0 |
| 400.0 | 23719.3 | -33.3 | 41.0 |
| 359.1 | 27460.6 | -43.0 | |
| 310.9 | 28746.6 | -45.6 | |
| 317.5 | 28912.3 | -44.3 | |
| 300.0 | 30163.3 | -44.3 | |
| 273.3 | 32206.9 | -47.3 | |
| 266.5 | 32757.2 | -46.1 | |
| 250.0 | 34153.5 | -47.2 | |
| 225.0 | 36450.2 | -47.2 | |
| 200.0 | 39000.6 | -50.3 | |
| 183.2 | 40382.2 | -51.6 | |
| 150.0 | 45102.9 | -57.4 | |
| 136.4 | 47400.0 | -55.7 | |
| 125.2 | 48890.3 | -55.4 | |
| 119.8 | 49912.4 | -57.9 | |
| 100.0 | 53526.1 | -62.9 | |
| 85.6 | 56682.8 | -63.3 | |
| 79.4 | 58227.1 | -58.1 | |
| 70.0 | 60841.2 | -59.1 | |
| 65.5 | 62207.5 | -62.0 | |
| 50.0 | 67740.6 | -60.7 | |
| 44.7 | 70062.4 | -57.4 | |
| 36.3 | 74196.2 | -56.8 | |
| 33.7 | 75041.1 | -58.2 | |
| 30.6 | 78380.0 | -55.1 | |
| 20.0 | 87056.2 | -49.6 | |

STATION ALTITUDE 3939.00 FEET MSL
30 NOV. 82
ASSEMBLY NO. 593

SIGNIFICANT LEVEL DATA

3340020595
WHITE SANDS
N.M.

TABLE 10 Cont'd

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE MIL FEET | TEMPERATURE AIR DEWPOINT DEGREES CENIGRADE | REL.HUM. PERCENT |
|-----------------------|-----------------------------------|--|---------------------|
| 15.3 | 92927.4 | -44.7 | |
| 14.1 | 94732.5 | -46.0 | |
| 10.0 | 102385.9 | -41.3 | |
| 7.9 | 107725.7 | -38.5 | |

SUBTIL LOGISTICS

52.40043 LAT U.G.

106.37033 LONG U.G.

STATION ALTITUDE 3989.0 FEET MSL
30 NOV. 62
ASCENT 1100. 593

UPPER AIR DATA
13000 FEET
WHITE SANDS
TABLE 20

STATION COORDINATES
32.40045 LAT 106.37035 LONG

| GEOMETRIC PRESSURE | PRESSURE | TEMPERATURE | REL. HUM. PERCENT | REL. HUM. PERCENT | DENSITY gm/cubic meter | SPEED OF SOUND KNOTS | WIND DIRECTION DEGREES (TRUE) | WIND SPEED KNOTS | INFLUX OF FRACTION |
|--------------------|----------|-------------|-------------------|-------------------|------------------------|----------------------|-------------------------------|------------------|--------------------|
| 5089.0 | 874.9 | 8.7 | 4.1 | 73.0 | 1.077.5 | 055.2 | 150.0 | 0.0 | 1.000279 |
| 4700.0 | 871.5 | 8.8 | 4.1 | 72.6 | 1.079.9 | 059.3 | 150.2 | 7.0 | 1.000279 |
| 4500.0 | 856.7 | 10.2 | 1.7 | 55.4 | 1.052.3 | 656.8 | 150.3 | 6.7 | 1.000267 |
| 4300.0 | 842.1 | 9.9 | 1.8 | 49.5 | 1.037.4 | 655.5 | 170.4 | 5.7 | 1.000259 |
| 5500.0 | 827.6 | 7.7 | -1.2 | 53.0 | 1.023.9 | 653.7 | 160.2 | 4.9 | 1.000255 |
| 6000.0 | 812.5 | 6.2 | -1.8 | 56.5 | 1.010.7 | 651.9 | 160.7 | 4.7 | 1.000251 |
| 6500.0 | 797.5 | 4.7 | -2.2 | 60.8 | 997.6 | 650.1 | 231.9 | 5.5 | 1.000248 |
| 7000.0 | 782.7 | 3.1 | -2.4 | 67.2 | 984.4 | 648.4 | 248.4 | 7.1 | 1.000245 |
| 7500.0 | 760.1 | 1.6 | -2.6 | 73.5 | 971.5 | 646.0 | 255.3 | 11.3 | 1.000242 |
| 8000.0 | 753.8 | -1 | -3.0 | 79.9 | 958.8 | 644.7 | 255.6 | 15.5 | 1.000239 |
| 8500.0 | 739.5 | -8 | -3.9 | 79.9 | 943.9 | 643.6 | 254.9 | 18.7 | 1.000234 |
| 9000.0 | 725.6 | -1.6 | -4.9 | 78.5 | 928.6 | 642.7 | 254.5 | 21.8 | 1.000229 |
| 9500.0 | 711.8 | -2.4 | -5.8 | 77.2 | 914.0 | 641.7 | 253.2 | 23.2 | 1.000224 |
| 10000.0 | 698.4 | -3.2 | -7.1 | 74.6 | 899.4 | 640.7 | 252.2 | 24.5 | 1.000219 |
| 10500.0 | 695.0 | -4.0 | -10.0 | 62.7 | 885.1 | 639.7 | 251.7 | 25.9 | 1.000212 |
| 11000.0 | 671.9 | -4.7 | -13.3 | 50.8 | 870.9 | 638.7 | 253.2 | 27.6 | 1.000206 |
| 11500.0 | 659.1 | -5.5 | -17.2 | 38.9 | 857.0 | 637.7 | 253.3 | 30.4 | 1.000199 |
| 12000.0 | 646.4 | -6.1 | -13.9 | 54.0 | 842.4 | 637.0 | 250.1 | 36.0 | 1.000194 |
| 12500.0 | 635.9 | -6.9 | -14.9 | 52.7 | 828.6 | 636.0 | 250.8 | 37.0 | 1.000195 |
| 13000.0 | 621.6 | -7.9 | -16.1 | 51.7 | 815.5 | 634.8 | 257.7 | 36.9 | 1.000191 |
| 13500.0 | 609.2 | -9.1 | -16.3 | 55.9 | 803.0 | 633.3 | 259.4 | 34.5 | 1.000188 |
| 14000.0 | 597.1 | -10.4 | -16.6 | 60.1 | 790.8 | 631.9 | 260.7 | 33.2 | 1.000185 |
| 14500.0 | 585.3 | -11.6 | -17.0 | 64.2 | 778.8 | 630.4 | 260.9 | 34.0 | 1.000182 |
| 15000.0 | 575.7 | -12.8 | -17.4 | 68.4 | 766.9 | 628.9 | 261.9 | 34.7 | 1.000180 |
| 15500.0 | 562.5 | -14.1 | -17.9 | 72.6 | 755.3 | 627.4 | 260.7 | 34.0 | 1.000177 |
| 16000.0 | 551.1 | -15.3 | -18.4 | 76.7 | 743.9 | 625.9 | 260.3 | 33.1 | 1.000174 |
| 16500.0 | 540.2 | -16.5 | -19.0 | 80.9 | 732.7 | 624.4 | 259.5 | 32.2 | 1.000171 |
| 17000.0 | 529.5 | -17.8 | -19.7 | 85.1 | 721.6 | 622.8 | 258.3 | 31.1 | 1.000168 |
| 17500.0 | 519.0 | -19.0 | -20.3 | 89.3 | 710.7 | 621.3 | 257.7 | 30.4 | 1.000165 |
| 18000.0 | 506.7 | -20.2 | -21.0 | 93.4 | 700.1 | 619.0 | 258.4 | 30.9 | 1.000163 |
| 18500.0 | 498.5 | -21.5 | -21.9 | 96.6 | 689.5 | 618.5 | 258.9 | 31.1 | 1.000160 |
| 19000.0 | 480.2 | -22.7 | -23.4 | 94.0 | 670.6 | 616.8 | 259.3 | 30.7 | 1.000157 |
| 19500.0 | 470.2 | -23.9 | -24.9 | 91.4 | 667.9 | 615.2 | 258.7 | 30.5 | 1.000154 |
| 20000.0 | 460.3 | -25.1 | -26.4 | 88.8 | 657.4 | 613.7 | 257.7 | 30.4 | 1.000151 |
| 20500.0 | 450.7 | -26.3 | -27.9 | 86.1 | 647.1 | 612.2 | 258.3 | 31.9 | 1.000148 |
| 21000.0 | 440.2 | -26.8 | -30.4 | 84.1 | 639.9 | 611.6 | 257.4 | 33.4 | 1.000145 |
| 21500.0 | 430.8 | -27.5 | -37.6 | 37.0 | 623.5 | 610.7 | 255.4 | 34.6 | 1.000140 |
| 22000.0 | 430.6 | -28.6 | -38.6 | 37.1 | 615.3 | 609.3 | 252.4 | 35.8 | 1.000138 |
| 22500.0 | 421.4 | -30.0 | -39.0 | 38.2 | 603.6 | 607.6 | 250.0 | 33.1 | 1.000136 |
| 23000.0 | 412.5 | -31.3 | -40.0 | 39.4 | 594.2 | 605.9 | 248.0 | 32.6 | 1.000135 |

STATION ALTITUDE 3989.00 FT. 15° SL
30 NOV. 62 0830 hrs. 1931
ASCENSION NO. 593

WEIGHT AIR DATA
34000.00000
WEIGHT SCALES
TABLE 20 cont'd

OUTLINE COORDINATES
32°40'04.3 LAT 06°
106°37'33 LONG 06°

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES | DEWPOINT CENTIGRANDE | REL.HUM. PERCENT | SPD OF SOUND METER | WIND DATA DIRECTION DEGREES (15) | WIND DATA SPEED KNOTS | INDEX OF REFRACTION |
|--------------------------------|-----------------------|-------------------------------|-------------------------|---------------------|--------------------------|--|-----------------------------|---------------------------|
| 23500.0 | 403.4 | -42.7 | -41.5 | 40.5 | 584.9 | 604.1 | 247.9 | 32.8 |
| 24000.0 | 395.1 | -34.0 | -43.4 | 37.9** | 575.5 | 602.5 | 247.7 | 33.4 |
| 24500.0 | 386.4 | -35.3 | -45.9 | 32.4** | 566.0 | 600.8 | 248.3 | 33.6 |
| 25000.0 | 378.0 | -36.6 | -48.7 | 27.0** | 556.7 | 599.2 | 249.7 | 33.7 |
| 25500.0 | 369.8 | -37.9 | -51.8 | 21.5** | 547.6 | 597.5 | 251.6 | 34.3 |
| 26000.0 | 361.7 | -39.2 | -55.3 | 16.0** | 538.6 | 595.9 | 254.2 | 35.9 |
| 26500.0 | 353.8 | -40.5 | -59.7 | 10.5** | 529.8 | 594.2 | 256.8 | 37.5 |
| 27000.0 | 346.1 | -41.8 | -61.2 | 5.0** | 521.1 | 592.6 | 259.5 | 39.1 |
| 27500.0 | 338.5 | -43.1 | -63.5 | 512.5 | 590.9 | 261.5 | 40.2 | 1.000114 |
| 28000.0 | 330.9 | -44.4 | -64.8 | 503.3 | 589.6 | 262.5 | 40.3 | 1.000112 |
| 28500.0 | 323.5 | -45.1 | -66.1 | 494.2 | 588.3 | 262.4 | 40.7 | 1.000110 |
| 29000.0 | 316.2 | -46.3 | -67.4 | 481.4 | 589.3 | 261.7 | 41.4 | 1.000107 |
| 29500.0 | 309.2 | -44.3 | -64.5 | 470.6 | 589.3 | 263.3 | 41.3 | 1.000105 |
| 30000.0 | 302.2 | -44.3 | -64.3 | 460.1 | 589.3 | 265.9 | 41.0 | 1.000102 |
| 30500.0 | 293.4 | -44.8 | -65.1 | 450.7 | 588.7 | 274.0 | 42.5 | 1.000100 |
| 31000.0 | 286.8 | -45.5 | -65.5 | 441.9 | 587.8 | 280.1 | 44.6 | 1.000098 |
| 31500.0 | 282.3 | -46.3 | -65.4 | 433.4 | 586.8 | 282.3 | 46.9 | 1.000097 |
| 32000.0 | 275.9 | -47.0 | -67.0 | 425.0 | 585.9 | 281.5 | 45.9 | 1.000095 |
| 32500.0 | 269.7 | -46.7 | -67.2 | 414.8 | 586.3 | 277.6 | 42.1 | 1.000092 |
| 33000.0 | 263.6 | -46.3 | -67.2 | 404.7 | 586.8 | 274.1 | 37.4 | 1.000090 |
| 33500.0 | 257.6 | -46.7 | -67.2 | 396.2 | 586.3 | 269.8 | 33.4 | 1.000088 |
| 34000.0 | 251.8 | -47.1 | -67.1 | 388.0 | 585.8 | 264.7 | 32.5 | 1.000086 |
| 34500.0 | 246.1 | -47.2 | -67.2 | 379.4 | 585.6 | 262.6 | 35.5 | 1.000084 |
| 35000.0 | 240.5 | -47.2 | -67.2 | 370.8 | 585.6 | 262.6 | 35.5 | 1.000083 |
| 35500.0 | 235.0 | -47.2 | -67.2 | 362.4 | 585.6 | 264.1 | 37.9 | 1.000081 |
| 36000.0 | 229.7 | -47.2 | -67.2 | 354.1 | 585.6 | 265.0 | 40.1 | 1.000079 |
| 36500.0 | 224.5 | -47.3 | -67.3 | 346.2 | 585.5 | 264.5 | 41.3 | 1.000077 |
| 37000.0 | 219.4 | -47.9 | -67.2 | 339.2 | 584.7 | 263.3 | 42.9 | 1.000076 |
| 37500.0 | 214.4 | -48.5 | -69.1 | 332.4 | 583.9 | 261.9 | 45.0 | 1.000074 |
| 38000.0 | 209.5 | -49.1 | -69.1 | 325.7 | 583.2 | 261.0 | 45.0 | 1.000073 |
| 38500.0 | 204.7 | -49.7 | -69.7 | 319.1 | 582.4 | 260.2 | 45.4 | 1.000072 |
| 39000.0 | 200.0 | -50.3 | -71.2 | 312.7 | 581.6 | 260.7 | 44.6 | 1.000071 |
| 39500.0 | 195.4 | -50.6 | -72.4 | 305.9 | 581.1 | 262.1 | 43.0 | 1.000068 |
| 40000.0 | 190.9 | -51.0 | -73.1 | 299.3 | 580.7 | 264.7 | 41.6 | 1.000067 |
| 40500.0 | 186.5 | -51.3 | -73.8 | 292.9 | 580.2 | 263.5 | 41.2 | 1.000065 |
| 41000.0 | 182.2 | -51.8 | -74.7 | 286.7 | 579.7 | 261.9 | 40.9 | 1.000064 |
| 41500.0 | 177.9 | -52.4 | -75.3 | 280.8 | 578.8 | 255.8 | 41.3 | 1.000063 |
| 42000.0 | 173.6 | -53.1 | -75.8 | 275.1 | 577.9 | 249.3 | 42.3 | 1.000061 |
| 42500.0 | 169.7 | -53.8 | -76.5 | 269.5 | 577.0 | 245.9 | 43.6 | 1.000060 |
| 43000.0 | 165.7 | -54.5 | -76.5 | 264.0 | 576.0 | 243.8 | 45.0 | 1.000059 |

** AT LEAST ONE OBSERVED RELATIVE HUMIDITY VALUE WAS USED IN THE COMPUTATION.

STATION ALTITUDE 3969.00 F.F.T. MSL
30 NOV. 62 0850 hrs MSL
ASCENSION NO. 393

UPPER AIR DATA
3340020593
WHITE SANDS
TABLE 20 cont'd

SEODELL COORDINATES
32°40'04.3" LAT DEG
106°37'03.3" LONG DEG

GEOPHYSICAL PRESSURE TEMPERATURE REL. HUM. SPEED OF SOUND NOISE
ALTITUDE DEGREES DEGREES DEGREE PERCENT GM/CURIC METER

| GEOMETRIC ALTITUDE IN FEET | PRESSURE IN MILLIBARS | TEMPERATURE DEGREES CENTIGRADE | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DIRECTION (DEGREES TRUE) | WIND SPEED KNOTS | INDEX OF REFRACTION |
|-------------------------------|--------------------------|--------------------------------------|----------------------|------------------------------|----------------------------|--|------------------------|---------------------------|
| | | | | | | | | |
| 43500.0 | 161.8 | -55.2 | 258.7 | 575.1 | 243.1 | 45.7 | 1.0000558 | |
| 44000.0 | 158.0 | -55.9 | 253.4 | 574.2 | 243.4 | 45.9 | 1.0000549 | |
| 44500.0 | 154.3 | -56.6 | 248.3 | 573.3 | 244.6 | 48.9 | 1.0000555 | |
| 45000.0 | 150.7 | -57.3 | 243.2 | 572.4 | 246.3 | 54.2 | 1.0000544 | |
| 45500.0 | 147.2 | -57.0 | 237.3 | 572.6 | 248.3 | 60.3 | 1.0000533 | |
| 46000.0 | 143.7 | -56.7 | 231.3 | 573.1 | 250.3 | 66.9 | 1.0000522 | |
| 46500.0 | 140.3 | -56.4 | 225.5 | 573.6 | 251.4 | 69.1 | 1.0000500 | |
| 47000.0 | 137.0 | -56.0 | 219.8 | 574.1 | 252.1 | 68.1 | 1.0000499 | |
| 47500.0 | 133.8 | -55.7 | 214.3 | 574.5 | 252.1 | 64.7 | 1.0000488 | |
| 48000.0 | 130.6 | -55.6 | 209.1 | 574.6 | 251.3 | 59.4 | 1.0000477 | |
| 48500.0 | 127.5 | -55.5 | 204.1 | 574.8 | 250.2 | 55.3 | 1.0000455 | |
| 49000.0 | 124.5 | -55.7 | 199.5 | 574.5 | 248.0 | 52.3 | 1.0000444 | |
| 49500.0 | 121.6 | -57.1 | 196.0 | 572.7 | 247.6 | 50.9 | 1.0000444 | |
| 50000.0 | 118.7 | -58.2 | 192.4 | 571.2 | 247.3 | 51.1 | 1.0000433 | |
| 50500.0 | 115.9 | -58.8 | 188.3 | 570.3 | 247.6 | 51.2 | 1.0000422 | |
| 51000.0 | 113.1 | -59.5 | 184.4 | 569.4 | 248.8 | 51.0 | 1.0000411 | |
| 51500.0 | 110.4 | -60.2 | 180.5 | 568.5 | 250.0 | 50.7 | 1.0000400 | |
| 52000.0 | 107.7 | -60.8 | 176.7 | 567.6 | 250.4 | 49.3 | 1.0000397 | |
| 52500.0 | 105.1 | -61.5 | 173.0 | 566.7 | 250.8 | 47.9 | 1.000039 | |
| 53000.0 | 102.6 | -62.2 | 169.4 | 565.8 | 249.1 | 46.9 | 1.0000386 | |
| 53500.0 | 100.1 | -62.9 | 165.9 | 564.9 | 246.7 | 46.1 | 1.0000377 | |
| 54000.0 | 97.7 | -63.0 | 162.9 | 564.8 | 244.1 | 45.6 | 1.0000366 | |
| 54500.0 | 95.3 | -63.0 | 158.0 | 564.7 | 241.6 | 45.3 | 1.0000355 | |
| 55000.0 | 93.0 | -63.1 | 154.2 | 564.6 | 239.3 | 45.1 | 1.0000344 | |
| 55500.0 | 90.7 | -63.2 | 150.5 | 564.0 | 239.6 | 44.1 | 1.0000334 | |
| 56000.0 | 88.5 | -63.2 | 146.9 | 564.5 | 240.3 | 43.1 | 1.0000333 | |
| 56500.0 | 86.1 | -63.3 | 143.4 | 564.4 | 243.1 | 41.8 | 1.0000322 | |
| 57000.0 | 84.3 | -62.2 | 139.2 | 565.6 | 247.2 | 40.5 | 1.0000311 | |
| 57500.0 | 82.3 | -60.5 | 134.8 | 568.0 | 251.2 | 39.3 | 1.0000303 | |
| 58000.0 | 80.3 | -58.9 | 130.5 | 570.3 | 254.7 | 38.1 | 1.0000299 | |
| 58500.0 | 78.4 | -58.2 | 127.0 | 571.2 | 258.6 | 36.9 | 1.0000288 | |
| 59000.0 | 76.5 | -58.4 | 124.1 | 570.9 | 258.9 | 35.1 | 1.0000277 | |
| 59500.0 | 74.7 | -58.6 | 121.2 | 570.7 | 258.4 | 33.1 | 1.000027 | |
| 60000.0 | 72.9 | -58.8 | 118.5 | 570.4 | 256.6 | 31.1 | 1.000026 | |
| 60500.0 | 71.2 | -59.0 | 115.7 | 570.1 | 252.1 | 29.4 | 1.0000256 | |
| 61000.0 | 69.5 | -59.4 | 113.2 | 569.5 | 247.0 | 27.9 | 1.0000255 | |
| 61500.0 | 67.8 | -60.5 | 111.1 | 568.1 | 242.3 | 26.7 | 1.000025 | |
| 62000.0 | 66.2 | -61.6 | 108.9 | 566.7 | 237.4 | 25.6 | 1.0000244 | |
| 62500.0 | 64.6 | -61.9 | 106.5 | 566.2 | 234.6 | 24.4 | 1.000023 | |
| 63000.0 | 63.0 | -61.8 | 103.9 | 566.3 | 235.3 | 22.6 | 1.000022 | |

STATION ALTITUDE 3989.00 FT, 1 MSL
30 NOV. 62 0850 HRS CST
ASCENSION NO. 593

WEATHER AIR DATA
3340020393
WHITE SAVANNAH
TABLE 20 Cont'd

STATION COORDINATES
32°40.043 LAT DEG
106.37033 LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | DEWPOINT DEGREES CENTIGRADE | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRCTION KNOTS L.GRATES (IN) | INDEX OF REFRACTION. |
|-----------------------------|--------------------|------------------------------------|-----------------------------|-------------------|------------------------|----------------------|---|----------------------------|
| 63500.0 | 61.5 | -61.7 | | | | 101.3 | 566.5 | 236.1 |
| 64000.0 | 60.0 | -61.6 | | | | 98.8 | 566.7 | 243.4 |
| 64500.0 | 59.6 | -61.5 | | | | 96.4 | 566.9 | 252.1 |
| 65000.0 | 57.2 | -61.3 | | | | 94.0 | 567.0 | 257.7 |
| 65500.0 | 55.8 | -61.2 | | | | 91.7 | 567.1 | 261.0 |
| 66000.0 | 54.4 | -61.1 | | | | 89.4 | 567.3 | 263.9 |
| 66500.0 | 53.1 | -61.0 | | | | 87.2 | 567.4 | 265.9 |
| 67000.0 | 51.8 | -60.9 | | | | 85.1 | 567.6 | 245.3 |
| 67500.0 | 50.6 | -60.8 | | | | 83.0 | 567.8 | 238.4 |
| 68000.0 | 49.4 | -60.3 | | | | 80.8 | 568.3 | 233.7 |
| 68500.0 | 48.2 | -59.6 | | | | 78.6 | 569.3 | 227.7 |
| 69000.0 | 47.1 | -58.9 | | | | 76.5 | 570.2 | 217.9 |
| 69500.0 | 45.9 | -58.2 | | | | 74.4 | 571.2 | 209.4 |
| 70000.0 | 44.8 | -57.5 | | | | 72.4 | 572.1 | 209.7 |
| 70500.0 | 43.8 | -57.5 | | | | 70.7 | 572.0 | 212.0 |
| 71000.0 | 42.7 | -57.7 | | | | 69.1 | 571.8 | 210.4 |
| 71500.0 | 41.7 | -57.9 | | | | 67.5 | 571.6 | 227.3 |
| 72000.0 | 40.7 | -58.0 | | | | 66.0 | 571.4 | 241.1 |
| 72500.0 | 39.8 | -58.2 | | | | 64.4 | 571.2 | 245.5 |
| 73000.0 | 38.8 | -58.3 | | | | 63.0 | 571.0 | 243.0 |
| 73500.0 | 37.9 | -58.5 | | | | 61.5 | 570.8 | 242.9 |
| 74000.0 | 37.0 | -58.7 | | | | 60.1 | 570.5 | 243.8 |
| 74500.0 | 36.1 | -58.0 | | | | 58.7 | 570.4 | 244.6 |
| 75000.0 | 35.3 | -58.6 | | | | 57.2 | 570.7 | 248.4 |
| 75500.0 | 34.4 | -58.4 | | | | 55.8 | 570.9 | 252.8 |
| 76000.0 | 33.6 | -58.1 | | | | 54.4 | 571.3 | 255.9 |
| 76500.0 | 32.8 | -57.5 | | | | 53.0 | 572.1 | 255.5 |
| 77000.0 | 32.0 | -56.9 | | | | 51.6 | 573.0 | 255.1 |
| 77500.0 | 31.3 | -56.2 | | | | 50.2 | 573.8 | 254.5 |
| 78000.0 | 30.5 | -55.6 | | | | 48.9 | 574.0 | 253.9 |
| 78500.0 | 29.8 | -55.0 | | | | 47.6 | 575.4 | 253.3 |
| 79000.0 | 29.1 | -54.7 | | | | 46.5 | 575.8 | 253.6 |
| 79500.0 | 28.5 | -54.4 | | | | 45.3 | 576.2 | 255.9 |
| 80000.0 | 27.8 | -54.1 | | | | 44.2 | 576.6 | 254.2 |
| 80500.0 | 27.2 | -53.8 | | | | 43.1 | 577.0 | 254.3 |
| 81000.0 | 26.5 | -53.4 | | | | 42.1 | 577.5 | 254.4 |
| 81500.0 | 25.9 | -53.1 | | | | 41.1 | 577.9 | 254.5 |
| 82000.0 | 25.3 | -52.8 | | | | 40.0 | 578.3 | 254.5 |
| 82500.0 | 24.7 | -52.5 | | | | 39.1 | 578.7 | 254.5 |
| 83000.0 | 24.2 | -52.2 | | | | 38.1 | 579.1 | 255.4 |

STATION ALTITUDE 3989.00 FT. 1 MSL
30 NOV. 62 0855N HRS INT
ASPECT/INCL NO. 593

UPPER AIR DATA
3340020593
WHITE SANDS
TABLE 20 CONTD

GEODETIC COORDINATES
32°40'04.3 LAT DEG
106°37'03.3 LONG DEG

| GEODETIC ALTITUDE NSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREE CENTIGRADE | DEWPOINT DEGREES CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION, DEGREES (TIN) | WIND SPEED KNOTS | INDEX OF REFRACTION |
|-------------------------------|-----------------------|---|--------------------------------|---------------------|------------------------------|----------------------------|--|---------------------|---------------------------|
| 83500.0 | 23.6 | -51.9 | -51.9 | 37.2 | 579.5 | 274.9 | 13.3 | 1.000008 | |
| 84000.0 | 23.1 | -51.5 | -51.5 | 36.3 | 580.0 | 283.1 | 14.4 | 1.000008 | |
| 84500.0 | 22.5 | -51.2 | -51.2 | 35.4 | 580.4 | 290.8 | 15.3 | 1.000008 | |
| 85000.0 | 22.0 | -50.9 | -50.9 | 34.5 | 580.8 | 297.7 | 16.3 | 1.000008 | |
| 85500.0 | 21.5 | -50.6 | -50.6 | 33.7 | 581.2 | 301.3 | 16.8 | 1.000007 | |
| 86000.0 | 21.0 | -50.3 | -50.3 | 32.8 | 581.6 | 300.8 | 16.0 | 1.000007 | |
| 86500.0 | 20.5 | -50.0 | -50.0 | 32.0 | 582.0 | 300.3 | 15.2 | 1.000007 | |
| 87000.0 | 20.1 | -49.6 | -49.6 | 31.3 | 582.4 | 297.6 | 15.0 | 1.000007 | |
| 87500.0 | 19.6 | -49.2 | -49.2 | 30.5 | 583.0 | 292.5 | 15.6 | 1.000006 | |
| 88000.0 | 19.2 | -48.8 | -48.8 | 29.7 | 583.5 | 287.7 | 16.3 | 1.000007 | |
| 88500.0 | 18.7 | -48.4 | -48.4 | 29.0 | 584.0 | 284.8 | 16.7 | 1.000006 | |
| 89000.0 | 18.3 | -48.0 | -48.0 | 28.3 | 584.6 | 283.6 | 16.4 | 1.000006 | |
| 89500.0 | 17.9 | -47.6 | -47.6 | 27.6 | 585.1 | 282.4 | 16.1 | 1.000006 | |
| 90000.0 | 17.5 | -47.1 | -47.1 | 27.0 | 585.7 | 280.4 | 16.4 | 1.000006 | |
| 90500.0 | 17.1 | -46.7 | -46.7 | 26.3 | 586.2 | 278.0 | 17.6 | 1.000006 | |
| 91000.0 | 16.7 | -46.3 | -46.3 | 25.7 | 586.8 | 275.8 | 18.9 | 1.000006 | |
| 91500.0 | 16.3 | -45.9 | -45.9 | 25.0 | 587.3 | 274.0 | 20.5 | 1.000006 | |
| 92000.0 | 16.0 | -45.5 | -45.5 | 24.4 | 587.8 | 272.7 | 22.5 | 1.000005 | |
| 92500.0 | 15.6 | -45.1 | -45.1 | 23.8 | 588.4 | 271.6 | 24.6 | 1.000005 | |
| 93000.0 | 15.2 | -44.8 | -44.8 | 23.3 | 588.8 | 270.8 | 26.1 | 1.000005 | |
| 93500.0 | 14.9 | -45.1 | -45.1 | 22.8 | 589.3 | 270.3 | 26.7 | 1.000005 | |
| 94000.0 | 14.6 | -45.5 | -45.5 | 22.3 | 587.8 | 269.8 | 27.3 | 1.000005 | |
| 94500.0 | 14.2 | -45.8 | -45.8 | 21.8 | 587.4 | 268.9 | 28.4 | 1.000005 | |
| 95000.0 | 13.9 | -45.8 | -45.8 | 21.4 | 587.4 | 267.4 | 30.5 | 1.000005 | |
| 95500.0 | 13.6 | -45.5 | -45.5 | 20.8 | 587.8 | 266.1 | 32.6 | 1.000005 | |
| 96000.0 | 13.3 | -45.2 | -45.2 | 20.4 | 586.2 | 265.5 | 34.5 | 1.000005 | |
| 96500.0 | 12.9 | -44.9 | -44.9 | 19.9 | 586.6 | 265.7 | 36.3 | 1.000004 | |
| 97000.0 | 12.7 | -44.6 | -44.6 | 19.4 | 589.0 | 265.9 | 38.1 | 1.000004 | |
| 97500.0 | 12.5 | -44.3 | -44.3 | 19.0 | 589.3 | 266.6 | 39.4 | 1.000004 | |
| 98000.0 | 12.2 | -44.0 | -44.0 | 18.5 | 589.7 | 268.9 | 39.7 | 1.000004 | |
| 98500.0 | 11.9 | -43.7 | -43.7 | 18.1 | 590.1 | 271.0 | 40.0 | 1.000004 | |
| 99000.0 | 11.6 | -43.4 | -43.4 | 17.7 | 590.5 | 271.6 | 40.1 | 1.000004 | |
| 99500.0 | 11.4 | -43.1 | -43.1 | 17.2 | 590.9 | 266.4 | 39.2 | 1.000004 | |
| 100000.0 | 11.1 | -42.8 | -42.8 | 16.8 | 591.3 | 261.0 | 38.7 | 1.000004 | |
| 100500.0 | 10.9 | -42.5 | -42.5 | 16.4 | 591.7 | 257.0 | 38.7 | 1.000004 | |
| 101000.0 | 10.6 | -42.2 | -42.2 | 16.0 | 592.1 | 260.5 | 39.4 | 1.000004 | |
| 101500.0 | 10.4 | -41.8 | -41.8 | 15.7 | 592.5 | 263.8 | 40.2 | 1.000003 | |
| 102000.0 | 10.2 | -41.5 | -41.5 | 15.3 | 592.9 | 260.9 | 41.1 | 1.000003 | |
| 102500.0 | 9.9 | -41.2 | -41.2 | 14.9 | 593.3 | 263.9 | 41.7 | 1.000003 | |
| 103000.0 | 9.7 | -41.0 | -41.0 | 14.6 | 593.6 | 262.2 | 42.2 | 1.000003 | |

STATION ALTITUDE 3989.00 FT. 1 MSL
 30 NOV. 62 0850 HRS. MST
 ASCENSION NO. 545

UPPER AIR DATA
 3340020593
 WHITE SANDS
 TABLE 20 Cont'd

GEODETIC COORDINATES
 32.40045 LAT DEG
 106.37033 LON DEG

| GEOMETRIC PRESSURE ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE 'IR DEGREE'S CENTIGRADE | DEGREE'S CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | STATE OF SOUND KNOTS | WIND DATA DIRECTION DEGREES (10) KNOTS | INDEX OF REFRACTION |
|--|-----------------------|--|------------------------|---------------------|------------------------------|----------------------------|---|---------------------------|
| 103500.0 | 9.5 | -40.7 | | | 14.3 | 593.9 | 271.9 | 42.7 |
| 104000.0 | 9.3 | -40.5 | | | 13.9 | 594.3 | 262.3 | 43.0 |
| 104500.0 | 9.1 | -40.2 | | | 13.6 | 594.6 | 253.1 | 44.3 |
| 105000.0 | 8.9 | -39.9 | | | 13.3 | 594.9 | | 1.000003 |
| 105500.0 | 8.7 | -39.7 | | | 13.0 | 595.3 | | 1.000003 |
| 106000.0 | 8.5 | -39.4 | | | 12.7 | 595.6 | | 1.000003 |
| 106500.0 | 8.3 | -39.1 | | | 12.4 | 595.9 | | 1.000003 |
| 107000.0 | 8.2 | -38.9 | | | 12.1 | 596.3 | | 1.000003 |
| 107500.0 | 8.0 | -38.6 | | | 11.9 | 596.6 | | 1.000003 |

STATION ALTITUDE 3939.40 FT. I MSL
30 NOV. 62 0850 HRS MST
ASCENSION NO. 393

MANDATORY LEVELS
3340020593
WHITE SANDS
TABLE 21

GEODETIC COORDINATES
32.40043 LAT deg
106.37033 LONG deg

| PRESSURE, EUPOTENTIAL MILLIBARS | EUPOTENTIAL FEET | TEMPERATURE | | REL. HUM. PERCENT | WIND DATA | |
|------------------------------------|---------------------|-------------|-----------------------|----------------------|------------------------|----------------|
| | | DEGREES | DEGREES CENTIGRADE | | DIR/DIR , FEET (IN) | SPEED KNOTS |
| 950.0 | 4774. | 9.9 | 7.6 | 48. | 164.4 | 0.1 |
| 900.0 | 6413. | 4.9 | -2.2 | 60. | 226.2 | 5.3 |
| 750.0 | 8125. | -3.5 | -3.1 | 81. | 255.4 | 16.3 |
| 700.0 | 9929. | -3.1 | -6.7 | 76. | 255.2 | 24.4 |
| 650.0 | 11845. | -6.0 | -16.2 | 44. | 255.9 | 34.3 |
| 600.0 | 13888. | -10.1 | -16.5 | 59. | 260.9 | 33.0 |
| 550.0 | 16068. | -15.4 | -18.5 | 77. | 260.2 | 33.0 |
| 500.0 | 18413. | -21.3 | -21.6 | 97. | 258.9 | 31.1 |
| 450.0 | 20924. | -26.7 | -34.1 | 50. | 257.6 | 33.2 |
| 400.0 | 23681. | -33.3 | -42.0 | 41. | 247.8 | 33.0 |
| 350.0 | 26708. | -41.1 | -62.4 | 8.** | 258.1 | 38.3 |
| 300.0 | 30105. | -44.3 | | | 260.3 | 41.4 |
| 250.0 | 34081. | -47.2 | | | 263.2 | 32.3 |
| 200.0 | 38908. | -50.3 | | | 260.0 | 44.7 |
| 175.0 | 41754. | -52.9 | | | 251.4 | 41.9 |
| 150.0 | 44983. | -57.4 | | | 246.5 | 55.1 |
| 125.0 | 48785. | -55.5 | | | 248.9 | 52.9 |
| 100.0 | 53362. | -62.9 | | | 246.7 | 46.1 |
| 80.0 | 57881. | -58.6 | | | 255.1 | 38.0 |
| 70.0 | 60634. | -59.1 | | | 249.0 | 28.4 |
| 60.0 | 63773. | -61.6 | | | 242.9 | 19.2 |
| 50.0 | 67488. | -60.7 | | | 236.4 | 8.9 |
| 40.0 | 72092. | -58.1 | | | 243.7 | 9.1 |
| 30.0 | 78048. | -55.1 | | | 253.5 | 15.1 |
| 25.0 | 81800. | -52.6 | | | 254.5 | 12.0 |
| 20.0 | 86651. | -49.6 | | | 297.5 | 15.0 |
| 15.0 | 92903. | -45.0 | | | 270.5 | 20.4 |
| 10.0 | 1n1835. | -41.3 | | | 268.2 | 41.5 |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL
30°00' N. 62°08' E. HPC 0551
ASCENSION NO. 1034

SIGHT LEVEL DATA
3540050184
JALLEN
TABLE 22

GEODETIC COORDINATES
33°10'71.2 LAT LTG
106°49'51.1 LONG LTG

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE MSL FEET | TEMPERATURE DEGREES CENTIGRADE | AIR DEWPOINT DEGREES CENTIGRADE | REL. HUM. PERCENT |
|-----------------------|-----------------------------------|--------------------------------------|--|----------------------|
| 872.3 | 4051.0 | 40.7 | -9 | 67.0 |
| 864.5 | 4291.7 | 40.7 | -1 | 72.0 |
| 858.0 | 4494.8 | 7.1 | 2.4 | 72.0 |
| 850.0 | 4748.2 | 7.3 | 1.6 | 67.0 |
| 839.6 | 5242.9 | 7.3 | 1.4 | 60.0 |
| 722.5 | 9089.7 | -10.8 | -2.8 | 93.0 |
| 700.0 | 9908.2 | -3.4 | -4.2 | 94.0 |
| 680.1 | 10316.4 | -3.5 | -7.3 | 75.0 |
| 634.7 | 12444.0 | -6.1 | -10.6 | 69.0 |
| 577.4 | 14852.4 | -12.1 | -15.9 | 73.0 |
| 528.7 | 17050.6 | -16.5 | -22.8 | 58.0 |
| 500.0 | 18420.6 | -20.3 | -25.1 | 65.0 |
| 442.7 | 21342.1 | -27.9 | -31.4 | 72.0 |
| 435.0 | 21756.9 | -27.8 | -35.0 | 50.0 |
| 400.0 | 23720.4 | -32.7 | -41.4 | 41.0 |
| 376.1 | 25138.6 | -35.9 | -46.6 | 32.0 |
| 351.4 | 26679.3 | -39.8 | -49.8 | 33.0 |
| 313.4 | 29219.5 | -46.0 | | |
| 307.2 | 29657.6 | -45.5 | | |
| 300.0 | 30176.6 | -46.9 | | |
| 283.6 | 31397.6 | -48.9 | | |
| 258.9 | 33380.6 | -46.1 | | |
| 250.0 | 34144.4 | -47.4 | | |
| 233.6 | 35610.5 | -50.9 | | |
| 213.2 | 37574.3 | -49.9 | | |
| 200.0 | 38949.6 | -50.4 | | |
| 190.6 | 39981.2 | -51.8 | | |
| 187.3 | 40354.9 | -51.1 | | |
| 168.5 | 42620.0 | -51.5 | | |
| 157.3 | 44081.1 | -51.7 | | |
| 153.9 | 44542.8 | -54.0 | | |
| 150.0 | 45084.0 | -55.5 | | |
| 137.5 | 46900.6 | -58.4 | | |
| 128.3 | 48344.3 | -56.2 | | |
| 121.8 | 49431.3 | -57.2 | | |
| 116.7 | 50324.9 | -56.6 | | |
| 100.5 | 51652.9 | -50.0 | | |
| 100.0 | 53521.6 | -62.1 | | |
| 90.8 | 55501.3 | -59.7 | | |
| 81.6 | 57637.8 | -63.1 | | |

STATION ALTITUDE 4051.00 FEET MSL
39 10W. 62° 08'55" HRS. NST
ASCENSION NO. 10th

SIGNIFICANT LEVEL DATA
3300030184
JULLEN
TABLE 22 Cont'd

GEODETIC COORDINATES
33°16'12" LAT UTG
106°49'51" LON UTG

| PRESSURE STEROMETRIC IN MILLIBARS | ALTITUDE IN FEET MSL | TEMPERATURE AIR DEGREES CENTIGRADE | REL. HUM. PERCENT |
|--------------------------------------|-------------------------|--|----------------------|
| 78.3 | 58531.6 | -60.4 | |
| 70.0 | 60033.9 | -60.9 | |
| 66.9 | 61760.8 | -62.2 | |
| 59.0 | 64343.6 | -59.1 | |
| 55.3 | 65581.0 | -60.3 | |
| 52.0 | 66958.5 | -56.8 | |
| 50.0 | 67776.2 | -58.6 | |
| 43.1 | 70846.1 | -60.5 | |
| 36.0 | 74083.3 | -55.2 | |
| 31.8 | 77190.2 | -58.6 | |
| 30.0 | 78414.0 | -56.9 | |
| 24.0 | 83118.4 | -54.2 | |
| 20.4 | 86594.1 | -50.8 | |

STATION ALTITUDE 4051.00 FFFF ASL
30 NOV. 82 0855 HRS. 1981
ASCENSION NO. 184

CHICAGO AIRPORT
334.0030164
JAN 1981 23

GEOPOLITICAL COORDINATES
33°16'71" LAT LTG
106°49'51" LONG LTG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES, CENTIGRADE | REFL.HUM. OF HUM. OF HUM. PERCENT | GFM/CUBIC METER | SOUND KNOTS | WIND DIRECTION DEGREES (TIN) | WIND DATA SPD/DIR KNOTS | WX OR REFLECTION |
|--------------------------------|-----------------------|---|--------------------------------------|--------------------|----------------|---------------------------------|-------------------------------|------------------------|
| 4051.0 | 872.3 | 4.7 | 7.9 | 67.0 | 1091.0 | 650.2 | 0 | 0 |
| 4500.0 | 857.8 | 7.1 | 2.4 | 71.9 | 1062.9 | 655.2 | 223.0 | 3.8 |
| 5000.0 | 842.1 | 7.3 | 1.5 | 66.5 | 1042.9 | 653.4 | 223.0 | 1.000265 |
| 5500.0 | 820.6 | 6.7 | 1.2 | 67.8 | 1025.8 | 652.7 | 223.0 | 1.000261 |
| 6000.0 | 811.2 | 5.5 | 7 | 71.3 | 1011.1 | 651.3 | 223.0 | 1.000257 |
| 6500.0 | 790.1 | 4.3 | 3 | 74.8 | 996.5 | 649.9 | 227.2 | 1.000253 |
| 7000.0 | 781.3 | 3.1 | 3 | 78.3 | 982.2 | 648.5 | 231.9 | 1.000249 |
| 7500.0 | 760.7 | 2.0 | 8 | 81.8 | 968.2 | 647.1 | 234.9 | 20.9 |
| 8000.0 | 752.5 | 0.8 | 1.4 | 85.4 | 954.3 | 645.7 | 236.9 | 22.4 |
| 8500.0 | 738.5 | -0.4 | 2.0 | 88.9 | 940.7 | 644.3 | 239.1 | 1.000240 |
| 9000.0 | 724.7 | -1.6 | 2.7 | 92.4 | 927.3 | 642.8 | 241.5 | 1.000236 |
| 9500.0 | 711.9 | -2.6 | 5.5 | 93.5 | 913.2 | 641.6 | 244.6 | 26.3 |
| 10000.0 | 697.5 | -3.4 | 4.9 | 89.7 | 898.8 | 640.6 | 249.4 | 26.9 |
| 10500.0 | 684.2 | -3.7 | 7.6 | 74.5 | 883.0 | 640.1 | 254.2 | 1.000222 |
| 11000.0 | 671.1 | -4.3 | 8.4 | 73.1 | 868.2 | 639.3 | 258.6 | 28.2 |
| 11500.0 | 658.3 | -4.9 | 9.3 | 71.7 | 853.5 | 638.6 | 261.5 | 1.000215 |
| 12000.0 | 645.7 | -5.6 | 10.1 | 70.3 | 839.2 | 637.8 | 262.3 | 33.4 |
| 12500.0 | 633.3 | -6.2 | 11.0 | 69.1 | 825.3 | 637.0 | 262.7 | 1.000198 |
| 13000.0 | 621.0 | -7.5 | 12.0 | 69.9 | 813.1 | 635.5 | 262.6 | 32.6 |
| 13500.0 | 608.9 | -8.7 | 13.1 | 70.6 | 801.1 | 633.9 | 262.8 | 30.8 |
| 14000.0 | 597.1 | -10.0 | 11.1 | 71.6 | 789.3 | 632.4 | 262.7 | 31.0 |
| 14500.0 | 585.4 | -11.2 | 15.2 | 72.4 | 777.7 | 630.9 | 262.7 | 1.000184 |
| 15000.0 | 574.0 | -12.4 | 16.4 | 72.0 | 766.0 | 629.4 | 262.6 | 31.1 |
| 15500.0 | 562.6 | -13.4 | 17.9 | 68.6 | 753.8 | 628.2 | 262.6 | 30.6 |
| 16000.0 | 551.4 | -14.4 | 19.5 | 65.2 | 741.8 | 626.9 | 262.7 | 28.6 |
| 16500.0 | 540.5 | -15.4 | 21.0 | 61.8 | 729.9 | 625.7 | 262.8 | 26.6 |
| 17000.0 | 529.6 | -16.4 | 22.6 | 50.3 | 718.3 | 624.5 | 260.8 | 25.5 |
| 17500.0 | 519.1 | -17.7 | 23.5 | 60.3 | 707.6 | 622.8 | 258.3 | 24.6 |
| 18000.0 | 508.6 | -19.1 | 24.4 | 62.9 | 697.1 | 621.1 | 255.3 | 24.8 |
| 18500.0 | 498.4 | -20.5 | 25.3 | 65.2 | 686.8 | 619.4 | 255.3 | 1.000173 |
| 19000.0 | 488.1 | -21.6 | 26.4 | 66.4 | 676.1 | 617.8 | 249.5 | 24.9 |
| 19500.0 | 478.0 | -23.1 | 27.4 | 67.6 | 665.6 | 616.2 | 247.4 | 24.7 |
| 20000.0 | 468.2 | -24.4 | 28.5 | 68.8 | 655.4 | 614.6 | 245.2 | 25.4 |
| 20500.0 | 458.5 | -25.7 | 29.5 | 70.0 | 645.2 | 612.9 | 244.5 | 1.000177 |
| 21000.0 | 449.1 | -27.0 | 30.6 | 71.2 | 635.3 | 611.3 | 243.8 | 1.000144 |
| 21500.0 | 439.8 | -27.9 | 32.6 | 63.6 | 624.3 | 610.2 | 247.4 | 24.7 |
| 22000.0 | 430.5 | -28.4 | 35.8 | 48.9 | 612.6 | 609.5 | 251.2 | 1.000138 |
| 22500.0 | 421.4 | -29.7 | 37.4 | 46.6 | 602.8 | 608.0 | 252.2 | 25.4 |
| 23000.0 | 412.5 | -30.9 | 39.0 | 44.3 | 593.1 | 606.4 | 258.5 | 26.3 |
| 23500.0 | 403.8 | -32.2 | 40.7 | 42.0 | 583.6 | 604.6 | 261.2 | 27.5 |

STATION ALTITUDE 4051.0 FT, 1 A.S.L.
30 NOV. 1952 0855 HRS. N.Y.T
ASCENSION NO. 1.04

UPPER AIR DATA
3340030184
JALLEN
TABLE 23 Cont'd

STATION COORDINATES
33.16712 LAT E
106.49511 LONG E

| GEOMETRIC ALTITUDE IN SL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREE C | TEMPERATURE DEGREE C | REL.HUM. PERCENT | DENSITY GM/CUBIC | SPD OF SOUND KNOTS | DIRCTION DEGREES (TH) | WIND DATA SPEED KNOTS | INDEX OF REFRACTION |
|----------------------------------|-----------------------|--------------------------------|-------------------------|------------------|------------------|-----------------------|--------------------------|-----------------------------|---------------------------|
| 24000.0 | 395.2 | -73.3 | -42.4 | 39.2 | 574.0 | 603.3 | 262.6 | 29.3 | 1.000129 |
| 24500.0 | 380.7 | -74.5 | -44.2 | 36.1 | 564.3 | 601.9 | 263.0 | 32.3 | 1.000128 |
| 25000.0 | 378.4 | -75.6 | -46.1 | 32.9 | 554.8 | 600.5 | 263.2 | 35.3 | 1.000124 |
| 25500.0 | 370.2 | -76.8 | -47.3 | 32.2 | 545.6 | 598.9 | 262.9 | 36.4 | 1.000122 |
| 26000.0 | 362.1 | -78.1 | -48.4 | 32.6 | 536.6 | 597.3 | 262.6 | 37.6 | 1.000120 |
| 26500.0 | 354.2 | -79.3 | -49.4 | 32.9 | 527.7 | 595.7 | 264.4 | 37.4 | 1.000118 |
| 27000.0 | 346.4 | -80.6 | -51.7 | 28.8** | 518.8 | 594.1 | 267.0 | 36.8 | 1.000116 |
| 27500.0 | 338.6 | -81.8 | -54.8 | 22.3** | 509.9 | 592.6 | 269.5 | 36.5 | 1.000114 |
| 28000.0 | 331.1 | -83.0 | -56.6 | 15.8** | 501.2 | 591.0 | 271.6 | 36.5 | 1.000112 |
| 28500.0 | 323.7 | -84.2 | -63.6 | 9.3** | 492.7 | 589.4 | 273.6 | 36.6 | 1.000110 |
| 29000.0 | 316.5 | -85.5 | -72.8 | 2.9** | 484.3 | 587.8 | 276.7 | 36.2 | 1.000108 |
| 29500.0 | 309.4 | -85.7 | | | 473.9 | 587.6 | 279.6 | 35.9 | 1.000106 |
| 30000.0 | 302.4 | -86.4 | | | 464.7 | 586.6 | 282.3 | 35.4 | 1.000104 |
| 30500.0 | 295.6 | -87.4 | | | 456.2 | 585.3 | 284.3 | 34.5 | 1.000102 |
| 31000.0 | 288.8 | -88.2 | | | 447.4 | 584.2 | 286.5 | 33.5 | 1.000100 |
| 31500.0 | 282.3 | -88.8 | | | 438.2 | 583.6 | 285.7 | 33.3 | 1.000098 |
| 32000.0 | 275.9 | -88.0 | | | 426.9 | 584.5 | 281.6 | 33.8 | 1.000095 |
| 32500.0 | 269.6 | -87.3 | | | 415.9 | 585.4 | 278.0 | 34.4 | 1.000093 |
| 33000.0 | 263.5 | -86.6 | | | 405.2 | 586.3 | 275.3 | 35.6 | 1.000090 |
| 33500.0 | 257.1 | -86.3 | | | 395.4 | 586.8 | 273.7 | 37.4 | 1.000088 |
| 34000.0 | 251.7 | -87.2 | | | 387.9 | 585.7 | 272.2 | 39.2 | 1.000086 |
| 34500.0 | 245.9 | -88.2 | | | 380.4 | 584.5 | 270.5 | 38.8 | 1.000085 |
| 35000.0 | 240.5 | -89.4 | | | 374.2 | 582.7 | 268.6 | 38.1 | 1.000083 |
| 35500.0 | 234.8 | -90.6 | | | 367.6 | 581.1 | 266.8 | 38.6 | 1.000082 |
| 36000.0 | 229.4 | -90.7 | | | 359.3 | 581.0 | 264.7 | 41.3 | 1.000080 |
| 36500.0 | 224.1 | -90.4 | | | 350.6 | 581.4 | 262.9 | 44.1 | 1.000078 |
| 37000.0 | 219.0 | -90.2 | | | 342.1 | 581.7 | 263.7 | 45.2 | 1.000076 |
| 37500.0 | 213.9 | -91.9 | | | 333.9 | 582.0 | 261.6 | 46.3 | 1.000074 |
| 38000.0 | 209.0 | -95.1 | | | 326.4 | 581.9 | 263.7 | 45.6 | 1.000073 |
| 38500.0 | 204.2 | -90.2 | | | 319.2 | 581.7 | 261.9 | 43.8 | 1.000071 |
| 39000.0 | 199.5 | -90.5 | | | 312.1 | 581.5 | 260.1 | 42.2 | 1.000070 |
| 39500.0 | 194.9 | -91.1 | | | 305.9 | 580.4 | 258.6 | 41.9 | 1.000068 |
| 40000.0 | 190.4 | -91.8 | | | 299.7 | 579.7 | 257.5 | 41.5 | 1.000067 |
| 40500.0 | 186.0 | -91.1 | | | 291.9 | 580.5 | 254.9 | 40.5 | 1.000065 |
| 41000.0 | 181.7 | -91.2 | | | 285.3 | 580.4 | 251.4 | 39.1 | 1.000064 |
| 41500.0 | 177.5 | -91.3 | | | 278.8 | 580.3 | 247.4 | 37.8 | 1.000062 |
| 42000.0 | 173.4 | -91.4 | | | 272.5 | 580.1 | 242.3 | 36.3 | 1.000061 |
| 42500.0 | 169.4 | -91.5 | | | 266.3 | 580.0 | 236.9 | 35.0 | 1.000059 |
| 43000.0 | 165.5 | -92.3 | | | 261.1 | 578.9 | 235.7 | 34.8 | 1.000058 |
| 43500.0 | 161.7 | -93.4 | | | 256.3 | 577.5 | 235.3 | 34.8 | 1.000057 |

** ADJUSTED RELATIVE HUMIDITY VALUE WAS USED IN INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL
30 NOV. 1942 0815 HRS EST
ASCENSION NO. 184

UPPLR AIR DATA
33400030184
JALLEN
TABLE 23 Cont'd

GEOPHYSIC COORDINATES
33.16712 LAT DEG
106.49511 LONG DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPD OF SOUND KNOTS | WIND DATA DIRCTION (EAST) | INDEX OF REFRACTION |
|-----------------------------|--------------------|------------------------------------|------------------|------------------------|--------------------|---------------------------------|---------------------------|
| 44000.0 | 157.9 | -54.5 | | 251.6 | 576.0 | 250.2 | 35.8 |
| 44500.0 | 154.2 | -54.1 | | 245.2 | 576.6 | 238.6 | 38.1 |
| 45000.0 | 150.6 | -55.3 | | 240.8 | 575.1 | 240.7 | 40.6 |
| 45500.0 | 147.0 | -56.2 | | 236.1 | 573.9 | 242.6 | 45.1 |
| 46000.0 | 143.6 | -57.0 | | 231.3 | 572.8 | 244.3 | 49.7 |
| 46500.0 | 140.2 | -57.8 | | 226.7 | 571.8 | 245.9 | 53.4 |
| 47000.0 | 136.8 | -58.2 | | 221.8 | 571.1 | 247.3 | 56.7 |
| 47500.0 | 133.6 | -57.5 | | 215.8 | 572.1 | 249.1 | 57.6 |
| 48000.0 | 130.4 | -56.7 | | 210.0 | 573.1 | 251.3 | 57.0 |
| 48500.0 | 127.3 | -56.3 | | 204.6 | 573.6 | 253.9 | 57.2 |
| 49000.0 | 124.3 | -56.8 | | 200.2 | 573.0 | 257.0 | 58.0 |
| 49500.0 | 121.4 | -57.2 | | 195.8 | 572.6 | 260.0 | 56.4 |
| 50000.0 | 118.5 | -56.8 | | 190.9 | 573.0 | 263.5 | 51.6 |
| 50500.0 | 115.7 | -56.8 | | 186.3 | 573.0 | 266.4 | 46.8 |
| 51000.0 | 113.0 | -57.3 | | 182.4 | 572.5 | 267.2 | 41.5 |
| 51500.0 | 110.3 | -57.8 | | 178.5 | 571.6 | 267.6 | 37.2 |
| 52000.0 | 107.7 | -58.6 | | 175.0 | 570.4 | 265.0 | 38.0 |
| 52500.0 | 105.1 | -59.9 | | 171.6 | 569.0 | 262.5 | 38.7 |
| 53000.0 | 102.6 | -61.0 | | 168.4 | 567.5 | 258.8 | 37.6 |
| 53500.0 | 100.1 | -62.1 | | 165.2 | 566.0 | 254.9 | 36.6 |
| 54000.0 | 97.7 | -61.5 | | 160.8 | 566.7 | 251.2 | 36.1 |
| 54500.0 | 95.3 | -60.9 | | 156.5 | 567.6 | 247.7 | 36.1 |
| 55000.0 | 93.0 | -60.3 | | 152.3 | 568.4 | 244.2 | 35.9 |
| 55500.0 | 90.8 | -59.7 | | 148.2 | 569.2 | 240.5 | 33.8 |
| 56000.0 | 88.6 | -60.5 | | 145.2 | 568.1 | 236.0 | 31.9 |
| 56500.0 | 86.5 | -61.3 | | 142.2 | 567.0 | 232.7 | 31.2 |
| 57000.0 | 84.4 | -62.1 | | 139.3 | 566.0 | 230.2 | 31.2 |
| 57500.0 | 82.4 | -62.9 | | 136.4 | 564.9 | 228.2 | 31.2 |
| 58000.0 | 80.4 | -62.0 | | 132.6 | 566.1 | 231.7 | 29.0 |
| 58500.0 | 78.4 | -60.5 | | 128.5 | 568.1 | 235.7 | 27.1 |
| 59000.0 | 76.5 | -60.5 | | 125.4 | 568.1 | 236.5 | 24.4 |
| 59500.0 | 74.7 | -60.6 | | 122.4 | 569.0 | 239.7 | 20.9 |
| 60000.0 | 72.9 | -60.7 | | 119.5 | 567.8 | 241.7 | 17.5 |
| 60500.0 | 71.1 | -60.6 | | 116.7 | 567.7 | 244.4 | 22.0 |
| 61000.0 | 69.4 | -61.1 | | 114.1 | 567.3 | 240.2 | 26.5 |
| 61500.0 | 67.8 | -61.6 | | 111.7 | 566.3 | 246.5 | 30.1 |
| 62000.0 | 66.1 | -61.9 | | 109.1 | 566.2 | 244.6 | 32.4 |
| 62500.0 | 64.5 | -61.5 | | 106.1 | 567.0 | 245.5 | 34.8 |
| 63000.0 | 63.0 | -60.7 | | 103.3 | 567.8 | 245.0 | 34.0 |
| 63500.0 | 61.5 | -60.1 | | 100.5 | 568.6 | 244.0 | 32.5 |

STATION ALTITUDE 4051.0 F. T. 45;
30 NOV. 82 0855 HRS. EST
ASCENSION NO. 134

UPPER AIR DATA
3340030184
JULIEN
TABLE 23 Cont'd

AT OULET CLOUDS,
33.16712 LAT SEC.
106.49511 LONG SEC.

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | TEMPERATURE DEWPOINT DEGREES CENTIGRADE | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOBS | WIND DIRECTION DEGREES | WIND SPEED KNOTS | WIND FRACTION |
|-----------------------------|--------------------|------------------------------------|---|-------------------|------------------------|----------------------|------------------------|------------------|---------------|
| 64000.0 | 60.0 | -59.5 | | | 97.8 | 569.4 | 245.7 | 31.5 | 1.000022 |
| 64500.0 | 58.6 | -59.2 | | | 95.4 | 569.8 | 252.0 | 32.4 | 1.000021 |
| 65000.0 | 57.2 | -59.7 | | | 93.3 | 569.2 | 257.8 | 33.6 | 1.000021 |
| 65500.0 | 55.8 | -60.1 | | | 91.2 | 568.6 | 260.7 | 32.1 | 1.000020 |
| 66000.0 | 54.5 | -59.4 | | | 89.8 | 569.5 | 262.7 | 28.9 | 1.000020 |
| 66500.0 | 53.2 | -58.1 | | | 86.1 | 571.4 | 265.0 | 25.8 | 1.000019 |
| 67000.0 | 51.9 | -56.9 | | | 83.6 | 572.9 | 266.9 | 16.7 | 1.000019 |
| 67500.0 | 50.7 | -58.0 | | | 82.0 | 571.4 | 273.5 | 7.4 | 1.000018 |
| 68000.0 | 49.5 | -58.7 | | | 80.4 | 570.5 | 253.9 | 1.4 | 1.000018 |
| 68500.0 | 48.3 | -59.0 | | | 78.6 | 570.0 | 22.9 | 2.1 | 1.000017 |
| 69000.0 | 47.1 | -59.4 | | | 76.8 | 569.6 | 71.0 | 3.7 | 1.000017 |
| 69500.0 | 46.0 | -59.7 | | | 75.1 | 569.2 | 122.0 | .5 | 1.000017 |
| 70000.0 | 44.9 | -60.0 | | | 73.4 | 568.8 | 46.9 | 6.5 | 1.000016 |
| 70500.0 | 43.8 | -60.3 | | | 71.7 | 568.4 | 248.0 | 13.3 | 1.000016 |
| 71000.0 | 42.8 | -60.2 | | | 70.0 | 568.4 | 449.4 | 15.1 | 1.000016 |
| 71500.0 | 41.8 | -59.4 | | | 68.1 | 569.5 | 249.7 | 16.6 | 1.000015 |
| 72000.0 | 40.8 | -58.6 | | | 66.2 | 570.0 | 250.5 | 17.0 | 1.000015 |
| 72500.0 | 39.8 | -57.8 | | | 64.4 | 571.7 | 252.1 | 15.1 | 1.000014 |
| 73000.0 | 38.9 | -57.0 | | | 62.6 | 572.8 | 254.2 | 13.2 | 1.000014 |
| 73500.0 | 37.9 | -56.2 | | | 60.9 | 573.9 | 251.0 | 11.8 | 1.000014 |
| 74000.0 | 37.0 | -55.3 | | | 59.3 | 575.0 | 44.2 | 10.8 | 1.000013 |
| 74500.0 | 36.2 | -55.7 | | | 57.9 | 574.5 | 256.7 | 10.0 | 1.000013 |
| 75000.0 | 35.3 | -56.2 | | | 56.7 | 573.8 | 253.9 | 8.7 | 1.000013 |
| 75500.0 | 34.5 | -56.7 | | | 55.5 | 573.1 | 250.2 | 7.5 | 1.000012 |
| 76000.0 | 33.7 | -57.3 | | | 54.3 | 572.4 | 256.4 | 6.0 | 1.000012 |
| 76500.0 | 32.9 | -57.8 | | | 53.2 | 571.6 | 22.1 | 4.2 | 1.000012 |
| 77000.0 | 32.1 | -58.4 | | | 52.1 | 570.9 | 11.5 | 2.5 | 1.000012 |
| 77500.0 | 31.3 | -58.2 | | | 50.8 | 571.2 | 117.0 | 2.6 | 1.000011 |
| 78000.0 | 30.6 | -57.5 | | | 49.4 | 572.1 | 25.0 | 3.2 | 1.000011 |
| 78500.0 | 29.9 | -56.9 | | | 48.1 | 573.0 | 30.6 | 4.2 | 1.000011 |
| 79000.0 | 29.2 | -56.6 | | | 46.9 | 573.3 | 35.9 | 7.8 | 1.000010 |
| 79500.0 | 28.5 | -56.3 | | | 45.8 | 573.7 | 35.0 | 11.4 | 1.000010 |
| 80000.0 | 27.8 | -56.0 | | | 44.6 | 574.1 | 36.0 | 14.9 | 1.000010 |
| 80500.0 | 27.2 | -55.7 | | | 43.5 | 574.5 | 40.5 | 17.1 | 1.000010 |
| 81000.0 | 26.5 | -55.4 | | | 42.5 | 574.9 | 44.5 | 19.4 | 1.000009 |
| 81500.0 | 25.9 | -55.1 | | | 41.4 | 575.2 | 46.2 | 21.7 | 1.000009 |
| 82000.0 | 25.3 | -54.8 | | | 40.4 | 575.6 | 51.2 | 17.9 | 1.000009 |
| 82500.0 | 24.7 | -54.6 | | | 39.4 | 576.0 | 36.7 | 14.4 | 1.000009 |
| 83000.0 | 24.1 | -54.3 | | | 38.4 | 576.4 | 76.4 | 11.2 | 1.000009 |
| 83500.0 | 23.6 | -53.8 | | | 37.4 | 576.9 | 71.5 | 11.1 | 1.000008 |

STATION ALTITUDE 405100 F. 1.000
SD NOV. 82 0850 HRS. 1.000
ASCESSION 1.00. 1.04

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | TEMPERATURE OEMPOUT DEGREES CENTIGRADE | KEL.HUM. PERCENT | DEF.HUM. GM/CURIC | SPD OF WIND KNOTS | WIND DIAK DEGREES (MM) | REFLECTION KNOTS | REFLECTION KNOTS | REFLECTION KNOTS | REFLECTION KNOTS |
|--------------------------------|-----------------------|---------------------------------------|---|---------------------|----------------------|-------------------------|---------------------------|---------------------|---------------------|---------------------|---------------------|
| 84600.0 | 25.0 | -53.3 | | | 30.0 | 577.0 | <71.7 | 11.0 | 1.0000018 | | |
| 84500.0 | 22.5 | -52.8 | | | 30.6 | 576.2 | <71.9 | 11.0 | 1.0000018 | | |
| 85000.0 | 22.0 | -52.4 | | | 34.7 | 576.9 | | | 1.0000018 | | |
| 85500.0 | 21.5 | -51.9 | | | 35.8 | 579.5 | | | 1.0000018 | | |
| 86000.0 | 21.0 | -51.4 | | | 36.9 | 580.2 | | | 1.0000017 | | |
| 86500.0 | 20.5 | -50.9 | | | 32.1 | 580.8 | | | 1.0000017 | | |

REFL. AIR DATA
1.5105 50184
JUL 11
TYPICAL 22 - 67°C
of JUL 11. COORDINATES
33.16712 1 AT LTG
106.49311 104 LTG

STATION ALTITUDE, 10,100 FT. FT.
30 DEG. 62' LAT.
ASCENTION NO. 104

MANUFACTURER'S
3340030184
JALLEN
TABLE 24

ATOMIC COORDINATES,
53.16712 LAT DEG
106.49311 LONG DEG

| PROJECTION, EQUATORIAL | TEMPERATURE | REL. HUM. | WIND, DATA |
|------------------------|---------------------|-----------|-------------------------|
| ALTITUDE, FT., T | AIR DEPTHS, DEGREES | PERCENT | WIND DIRECTION, DEGREES |
| 450.0 | 4745. | 7.3 | 1.6 |
| 800.0 | 6578. | 4.6 | .4 |
| 750.0 | 8094. | .6 | -1.5 |
| 700.0 | 9899. | -5.4 | -4.2 |
| 650.0 | 11818. | -5.3 | -9.6 |
| 600.0 | 13867. | -9.7 | -13.9 |
| 550.0 | 16051. | -14.5 | -19.7 |
| 500.0 | 18397. | -20.3 | -25.1 |
| 450.0 | 20425. | -26.4 | -30.5 |
| 400.0 | 23683. | -32.7 | -37.9 |
| 350.0 | 26723. | -40.0 | -40.3 |
| 300.0 | 30120. | -46.9 | -52.3 |
| 250.0 | 34074. | -47.4 | -52.4 |
| 200.0 | 39860. | -50.4 | -55.4 |
| 175.0 | 41708. | -51.4 | -57.4 |
| 150.0 | 44967. | -55.5 | -61.4 |
| 125.0 | 46754. | -56.7 | -63.4 |
| 100.0 | 53361. | -62.1 | -69.4 |
| 80.0 | 57405. | -61.7 | -69.4 |
| 70.0 | 60631. | -60.9 | -70.5 |
| 60.0 | 63773. | -59.5 | -81.4 |
| 50.0 | 67527. | -58.6 | -80.7 |
| 40.0 | 72110. | -58.0 | -80.1 |
| 30.0 | 78096. | -56.9 | -78.7 |
| 25.0 | 81824. | -54.7 | -75.4 |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS SET IN THE INTERPOLATION.